CS1030 - Problem Solving with Computers

Fall 2020 Syllabus

COVID-19 New Update (8/22/2020): Please note that face shields will not be allowed as a substitute for a cloth face covering. REQUIRED: Students MUST wear FACE MASKS that cover the nose and mouth while attending class. This is per DSU and UTAH STATE requirements. If you don’t wear a mask you are asked to view the class remotely. For current information: Covid-19 Emergency Response Plan

Catalog Description For any student interested in how computers are used to solve problems. This course will introduce the use of computers in problem solving including problem decomposition and algorithm construction. Students will be required to complete simple programming projects.

Prerequisites: None

Course fee: $20, used to assist in maintaining CIT infrastructure.

Section:
CS1030-01 MWF 9:00am - 9:50am in Smith 109
- CRN 41132
- Final Exam: Monday 7 December 9-10:50am

Instructor: Carol Stander

Office Hours: MWF 11:00-11:50am, Tues 3:00-4:00pm, or by appointment
Virtual Office Hour: Monday 1:30-2:30pm

Office: North Burns 236

Objectives

At the end of the course, students will be able to:

- read and write small computer programs and apps
- write a simple web page in HTML
- take code and change it to make something new
- take data and display it in a meaningful way
- communicate through discussion and writing how computers and big data affect our daily lives
- work with peers in creating, writing, and evaluating computer programs

Resources

Texts

There is one required text for this course.

- BLOWN to BITS, Your Life, Liberty, and Happiness after the Digital Explosion by Hal Abelson, Ken Ledeen, and Harry Lewis, ISBN: 0137135599
- FREE for download from http://www.bitshook.com/excerpts/ under a Creative Commons License.

Computer Resources

You may use the computers in the Smith Building. There will be lab assistants available to help you. Check the lab schedule for times. You may also use any other computer you wish. These computers require a valid CIT username and password. If you have not activated your CIT login, visit http://cit.dixie.edu/facilities/passwd/passwd.php to activate it, or ask a lab assistant to help you sign up for one.

Course Materials

All materials for this course are in Canvas.

Assignments and Exams

Reading and Discussion
There are required readings from the text and other online material. There will be class discussions on the reading. Scoring is in the discussion rubric.

**Activities**

When in a F2F class the activities will be done in small groups, otherwise they can be done online. Activities focus on decomposing problems, looking for patterns, generalizing patterns, and designing algorithms.

**Programming Assignments**

Most weeks will require a homework assignment to be completed. These will mostly be hands on coding problems. You will submit them in Canvas. Programs will be graded according to a rubric in Canvas.

**Quizzes & Reflections**

There are weekly quizzes, a midterm quiz, and a final quiz.

**Midterm Project**

Students will choose the type and subject matter of the project. The project must meet the technical guidelines given in Canvas.

**Final Project**

Students will build on the midterm project. The project must meet the technical guidelines given in Canvas.

**Grading**

Your course point total will be calculated as follows:

<table>
<thead>
<tr>
<th>Course Work</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Programming Assignments</td>
<td>20%</td>
</tr>
<tr>
<td>Activities</td>
<td>20%</td>
</tr>
<tr>
<td>Discussions</td>
<td>15%</td>
</tr>
<tr>
<td>Quizzes &amp; Reflections</td>
<td>15%</td>
</tr>
<tr>
<td>Midterm Project</td>
<td>10%</td>
</tr>
<tr>
<td>Final Project</td>
<td>20%</td>
</tr>
</tbody>
</table>

Here is the grading scale:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt;= 94</td>
<td>A</td>
</tr>
<tr>
<td>&gt;= 90</td>
<td>A-</td>
</tr>
<tr>
<td>&gt;= 87</td>
<td>B+</td>
</tr>
<tr>
<td>&gt;= 84</td>
<td>B</td>
</tr>
<tr>
<td>&gt;= 80</td>
<td>B-</td>
</tr>
<tr>
<td>&gt;= 77</td>
<td>C+</td>
</tr>
<tr>
<td>&gt;= 74</td>
<td>C</td>
</tr>
<tr>
<td>&gt;= 70</td>
<td>C-</td>
</tr>
<tr>
<td>&gt;= 67</td>
<td>D+</td>
</tr>
<tr>
<td>&gt;= 64</td>
<td>D</td>
</tr>
<tr>
<td>&gt;= 60</td>
<td>D-</td>
</tr>
<tr>
<td>&lt; 60</td>
<td>F</td>
</tr>
</tbody>
</table>

**Course Policies**

**Absences**

Students are responsible for material covered and announcements made in class. School-related absences may be made up only if prior arrangements are made. The class is approximate. The instructor reserves the right to modify the schedule according to class needs. Changes will be announced in class and posted in Canvas.

**Late work**

Assignments are due on the date specified in the schedule.

Late work for weekly assignments and discussions will be subject to penalties as determined by the instructor.
Projects, quizzes, and activities will not be accepted late without prior consent of the instructor.

College Policies

Additional college policies, calendars, and statements are available online at http://new.dixie.edu/reg/syllabus/.

Disability

If you suspect or are aware that you have a disability that may affect your success in the course you are strongly encouraged to contact the Disability Resource Center (DRC) located at the North Plaza Building. The disability will be evaluated and eligible students will receive assistance in obtaining reasonable accommodations. Phone # 435-652-7516

Title IX

DSU seeks to provide an environment that is free of bias, discrimination, and harassment. If you have been the victim of sexual harassment/misconduct/assault we encourage you to report this to the college’s Title IX Director, (435) 652-7731, titleix@dixie.edu. If you report to a faculty member, she or he must notify the Title IX Director about the basic facts of the incident.

Covid-19

The CDC recommends wearing cloth face coverings in public settings to slow the spread of the coronavirus and to help people who may have the virus and do not know it from transmitting it to others. Consequently, a face covering must be worn continuously while you are inside the classroom, laboratory or other instructional setting or inside a faculty members office. This practice will provide a safer instructional environment for you, your classmates, and the instructor and will help slow or stop the spread of coronavirus in our community. There will be no exceptions to this rule if you wish to attend class in person. If you have a medical condition or other objection to wearing a face covering, you are welcome to attend class via interactive live stream. Face coverings can be made from household items or purchased.