









# Syllabus – CS 2130 ONLINE – Computational Structures

Instructor:	<p>Alison Sunderland  Email: <a href="mailto:alisonsunderland@weber.edu">alisonsunderland@weber.edu</a> Canvas email is preferred for course related communications  Phone: 801-395-3592</p>
Required Texts:	<p><b>We will be using zyBook</b></p> <ol style="list-style-type: none"> <li>1. Sign in or create an account at <a href="https://learn.zybooks.com">learn.zybooks.com</a> </li> <li>2. Enter zyBook code: WEBERCS2130SunderlandSummer2020</li> <li>3. Select Section CRN 11791</li> <li>4. Subscribe</li> </ol> <p>A subscription is \$58. Subscriptions will last until August 27, 2020. Once you have signed up, refer to the <i>How to Use zyBooks</i> book in your Library for information on using a zyBook.</p> <p><b>We will be also be using a second reference text:</b>  Discrete Mathematical Structures (6th Edition), Kolman, Busby, Ross. ISBN-13: 978-0132297516  <i>Note: the Classic version and the international version will work just as well.</i></p>
Virtual Meetings with Instructor	<p>Communication is a two-way street. There is a <i>Hey, I Have a Question</i> discussion forum to ask questions about the course material and hopefully help answer questions from other students.</p> <p>If it's of a more personal nature, visit during office hours, e-mail me through Canvas, or schedule an online meeting (by appointment) anytime you feel you are having difficulty with the material or would like feedback on your performance. Appointments should be made well in advance. Don't wait to the last minute to ask for help.</p>
Course Description:	<p>This course is an overview of the fundamentals of algorithmic, discrete mathematics applied to computation using a contemporary programming language. Topics include sets, functions, logic, matrices, relations, graphs, trees, regular expressions, grammars, finite state machines, and data encoding. Emphasis will be on the application of abstract models in a discrete software computational context.</p> <p>Prerequisite: CS 1400.</p>
Learning Outcomes:	<p>Upon successful completion of this course, the student shall be able to:</p> <ul style="list-style-type: none"> <li>• Apply mathematical reasoning in order to read, comprehend, and construct mathematical arguments.</li> <li>• Apply combinatorial analysis to solve counting problems.</li> <li>• Manipulate discrete structures, including sets, permutations, relations, graphs, trees, and finite state machines.</li> <li>• Select and validate computing algorithms and construct computer programs implementing those algorithms.</li> <li>• Develop and construct mathematical models for application to other fields of study.</li> </ul>
Canvas:	<p>This online course is hosted in Canvas. Once it has been made available, go to <a href="http://canvas.weber.edu">http://canvas.weber.edu</a> , and follow the login instructions using your weber.edu portal username and password. For problems with Canvas, click the Canvas Help button, email <a href="mailto:wsuonline@weber.edu">wsuonline@weber.edu</a>, call 801-626-6499, or visit online tech support in room 215 of Lampros Hall or check the <a href="#">Canvas Getting Started guides</a> </p>
Announcements	<p>I use Canvas Announcements to communicate with the class. Announcements are sent at the beginning of each week and whenever important information becomes available. Either view announcements in the course Announcements link or set up your Canvas profile to receive Announcements:</p> <ul style="list-style-type: none"> <li>• Select <b>Account</b> in the purple navigation bar on the left side of the page.</li> <li>• select <b>Setting</b> <ul style="list-style-type: none"> <li>○ add one or more <b>Ways to Contact</b>, preferably the email you check daily or your active cell phone number</li> </ul> </li> <li>• select <b>Notifications</b></li> </ul>

	<ul style="list-style-type: none"> <li>○ under <b>Announcement</b> set at least one contact method to ASAP</li> </ul> <p>You are responsible for the information contained in all Announcements.</p>
<b>Class Participation:</b>	<p>This may be your first online course, so you may wonder how the lessons are organized and how much time is required of you to earn a good grade.</p> <p>There are about the same number of lessons as there would be lectures in a walk-in class that meets two times (4 hours) per week for 16 weeks. This does not count reading and homework time, which is usually double the amount of class time. So, realistically, <b>you should expect to devote <i>at least 12 hours per week on this course to successfully pass it.</i></b></p> <p>I will be presenting new material almost every week. You will be responsible for reading at least one chapter per week, plus viewing the videos and completing a homework assignment approximately once per week.</p> <p>Just as attendance is a significant factor in a student's success in a traditional class, your online participation in this course will be important to your learning and academic success. You should plan to log in to the course, even if briefly, at least every couple days. This will allow you to check for any new announcements, read and participate in discussions, and review other materials that might have been posted. The benefits of actively participating in the class are numerous: you will become a more involved learner, get to know your fellow classmates and benefit from their questions and comments, as well as contributing your own.</p> <p>Also, don't wait until the last minute to start your work - it's a guaranteed way to fail my course!</p>
<b>Group work</b>	<p>Computer Science is rarely an individual activity. There is usually a team of people working together to define requirements, identify problems, and/or implement solutions. As a result, you will be placed in several semi-permanent groups during the semester. The group is a tool you can use to help solidify your understanding of the content, ask questions about assignment requirements, brainstorm ideas, and share resources. Groups are given a private Canvas homepage. To access the page, select the group name in the Group icon in the main Canvas navigation pane.</p> <p>Much of the time you will be submitting your own individual work, but you are still expected to actively participate in group activities.</p>
<b>Student with Disabilities</b>  <b>Other Student Services and Resources</b>	<p>Any student requiring accommodations or services due to a disability must contact <a href="#">Services for Students with Disabilities</a>  (weber.edu/sdd)</p> <p><b>Ogden Campus:</b> 801-626-6413, Student Services Center, room 181  <b>Davis Campus:</b> 801-395-3442, Bldg D2, room 256</p> <p>Refer to the <b>Student Resources link in Canvas</b> for information on other services and resources:  <b>Ogden Campus:</b> 801-626-7009: Many services in Student Services building.  <b>Davis Campus:</b> 801-395-3460: Most services in D2, Suite 262, 2nd floor.</p>
<b>Tutoring:</b>	<p>Free online tutoring is available for a variety of subjects if you need it. For Computer Science courses, check the Ogden campus <a href="#">eTutoring</a> . Login with your weber.edu portal username and password. For CS and other courses, check the <a href="#">Davis campus Learning Center</a>.</p>
<b>CS Network Access:</b>	<p>CS students have access to the CS network which hosts two network servers, <a href="#">Athena and Icarus</a>. CS Network Access and login procedures can be found in Additional Resources for CS Students link in the Getting Started Module.</p> <p>Network accounts should be created for the students automatically. If you have any problems logging into the system, please contact <a href="mailto:PatrickBeck@weber.edu">PatrickBeck@weber.edu</a>  for technical assistance. <b>Include your W# in ALL correspondences with Patrick.</b></p>
<b>Course Fees</b>	<p>Course fees for the Computer Science major are designed to cover the costs of lab equipment maintenance and replacement including desktop and server computer systems and software; consumable materials and supplies; and support for lab aides, student tutors, and online instructional resources.</p>

Grading:	<table> <tr> <th data-bbox="358 111 1143 191">Assignments</th><th data-bbox="1143 111 1442 191">Total / 100%</th></tr> <tr> <td data-bbox="358 191 1143 273">Group Discussions</td><td data-bbox="1143 191 1442 273">5%</td></tr> <tr> <td data-bbox="358 273 1143 352">zyBook Activities and Support Videos</td><td data-bbox="1143 273 1442 352">30%</td></tr> <tr> <td data-bbox="358 352 1143 434">Homework Assignments:</td><td data-bbox="1143 352 1442 434">40%</td></tr> <tr> <td data-bbox="358 434 1143 514">Computer Programs / Test Cases</td><td data-bbox="1143 434 1442 514">25%</td></tr> </table>	Assignments	Total / 100%	Group Discussions	5%	zyBook Activities and Support Videos	30%	Homework Assignments:	40%	Computer Programs / Test Cases	25%
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Group Discussions	<p>Group discussions are design to promote conversation on the homework assignments. Group discussions are graded. With a noted few exceptions, the discussions will be open for 4 days: Mon, Tues, Wed, and Thursday. To receive full credit, students must participate in the conversation on <b>at least 2 of the days</b> and contribute meaningful replies that address the topic, add value to the conversation, and encourage more conversation.</p>										
zyBooks Activities	<p>Your Discrete Math zyBook is not an ebook, it is the core learning material for this class. Your zyBook is made up of Participation Activities (PA) and Challenge Activities (CA).</p> <p><b>PAs</b> are animations and interactive learning questions integrated into the reading. After defining a concept with brief text, PAs are used to reinforce understanding on the concept. Many concepts only exist in PAs. The questions' explanations are key elements, especially for wrong answers, that seek to break down misconceptions.</p> <p><i>Note: When returning to a section, the previous answers to the learning questions (short answer, true/false, multiple choice, etc.) are not shown. The questions need to be answered again. This active reviewing (self-quizzing) is more effective in learning and boosts memory more than rereading.</i></p> <p><b>CAs</b>, if present in the section, are small tasks that give practice in the concepts being introduced. CAs are auto-graded, which gives immediate feedback to the answers and aids in learning. Every section has PAs, but not every section has CAs.</p> <p>Some of the sections are marked <b>Optional</b>. Obviously, they are not required but they contain interesting information that can take you deeper into the concepts.</p> <p>zyBook activity scores do not have to be submitted in Canvas. I will run activity reports in zyBooks and upload the scores to the Canvas Gradebook.</p>										
Support Videos	<p>I have created a series of Support Videos to augment certain concepts. <b><i>The videos support the concepts and are not meant to be the sole source of the material.</i></b> Links to the Support Videos are available in the <i>Support Videos</i> link in each Canvas section.</p>										
Homework Assignments	<p>Homework assignments are separate from the zyBooks Activities. Homework is made up of questions related to material covered in the zyBook section/textbook chapter. Homework is submitted in Canvas. If you complete homework on paper, scan it or take a picture of it and submit it in Canvas as a SINGLE document.</p>										
Homework Assignment Grading	<p>There is a great deal of value in figuring out where you went wrong when working thru a problem and correcting your mistakes. To that end, you will be grading your own homework assignments. To facilitate this, there will be two submission for each homework assignment:</p> <p>For the <b>First Submission</b>, read the assigned zyBook section(s)/textbook chapter(s), and watch the related Support Videos. Then complete the assignment worksheet and submit as a single document by the due date.</p> <p>For the <b>Second (self-graded) Submission</b>, using the worksheet submitted in the First Submission and the provided answer key, correct the worksheet <i>using a different color than the original text</i>. Indicate the points received for each question AND the final score for the entire assignment. Resubmit the self-graded worksheet by the due date.</p>										

What if I don't self-grade an assignment?	<p>To receive credit for <b>correct</b> answer, you must show your work on the original worksheet.</p> <p>You can receive half credit on <b>wrong</b> answers if you</p> <ol style="list-style-type: none"> <li>1. showed your work on the original question</li> <li>2. show/describe/explain how you got it wrong</li> <li>3. show/describe/explain how to get it right</li> </ol> <p>DO NOT just show the right answer. To receive half credit, you must SHOW/EXPLAIN what went wrong and how to get the right answer.</p> <p><b>Assignments that are not self-graded will receive a zero.</b> BUT students are given ONE instructor-graded assignment 'token'. You can redeem your token for any worksheet during the semester, but it must be submitted by the worksheet's Second Submission due date. The instructor-graded assignment will not be eligible for the wrong answer half-credit points or the grading rubric points. To redeem the token, submit the completed worksheet under the <i>Instructor-graded Token Assignment</i> link.</p>														
Computer Programs / Test Cases	<p>Students will be creating <b>computer programs</b> to implement many of the discrete structures covered in the class. Programs can be written in Java, C, C++, or Python. Programs must be entirely a student's own work. You are encouraged to discuss program requirements and algorithms with other students but <b>DO NOT share your source code</b>.</p> <p><b>Test Cases</b> are required for those programs that have user input. A test case is a sequence of input conditions or values along with the expected output which a tester uses to determine if a program is functioning correctly. Test Cases will be included as a part of the grade for each applicable program. <b>Refer to Developing Test Cases in the Getting Started Module in Canvas for my expectations on test cases.</b></p>														
Late Policy	<p>Late assignments will be accepted up to 24 hours following the original due date with no penalty. <b>Assignments will not be accepted after the 24-hour grace period.</b></p>														
Military Deployment	<p>During deployment, military personnel will not be penalized for late homework assignments. Submit a copy of the deployment letter with dates before the deployment begins.</p>														
Cheating:	<p>Academic honesty is highly valued at Weber State University and within this class. Academic dishonesty involves any and all of the following:</p> <ul style="list-style-type: none"> <li>• Having a tutor or friend complete a portion of your assignments</li> <li>• Having a reviewer make extensive revisions to an assignment</li> <li>• Copying work directly from another student</li> <li>• Duplicating &lt;all or some of&gt; another person's source code for use in your own program</li> <li>• Using information from online information services without proper citation</li> <li>• Collusion, which is the unauthorized collaboration with another person in preparing work offered for credit</li> </ul> <p>Students are expected to be familiar with the WSU Student Code and abide by it. The Code may be reviewed at <a href="#">6.22 Student Code, specifically Section 4D</a> . All necessary steps will be taken to enforce the Student Code to guarantee fairness to all students.</p>														
Disclaimer	<p>I reserve the right to amend the syllabus in any way deemed necessary.</p> <p><i>Items with the internet link symbol [  ] are links to resources on the internet.</i></p>														
Letter Grades:	<table border="1"> <tbody> <tr> <td>Total &gt;= 94%</td><td>... A</td></tr> <tr> <td>90% &lt;= Total &lt; 94%</td><td>... A-</td></tr> <tr> <td>87% &lt;= Total &lt; 90%</td><td>... B+</td></tr> <tr> <td>84% &lt;= Total &lt; 87%</td><td>... B</td></tr> <tr> <td>80% &lt;= Total &lt; 84%</td><td>... B-</td></tr> <tr> <td>77% &lt;= Total &lt; 80%</td><td>... C+</td></tr> <tr> <td>74% &lt;= Total &lt; 77%</td><td>... C</td></tr> </tbody> </table>	Total >= 94%	... A	90% <= Total < 94%	... A-	87% <= Total < 90%	... B+	84% <= Total < 87%	... B	80% <= Total < 84%	... B-	77% <= Total < 80%	... C+	74% <= Total < 77%	... C
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	<b><i>Non-passing grade for CS majors:</i></b>	
	<b><i>70% &lt;= Total &lt; 74%</i></b>	... C-
	<b><i>67% &lt;= Total &lt; 70%</i></b>	... D+
	<b><i>64% &lt;= Total &lt; 67%</i></b>	... D
	<b><i>60% &lt;= Total &lt; 64%</i></b>	... D-
	<b><i>Total &lt; 60%</i></b>	... E
	Incompletes can only be given in extraordinary circumstances.	