CSCI 311: Algorithms and Data Structures  
Abbreviated Syllabus for Spring Semester 2010  
Visit http://www.ecst.csuchico.edu/~juliano/csci311 for additional detail.

Prerequisites  
• CSCI 211, Programming and Algorithms II, with a grade of C- or higher.  
• MATH 217, Discrete Mathematical Structures, recommended.

Description  
This course focuses on object-oriented methodologies in designing and implementing a variety of data structures and algorithms. Coverage includes recursion, trees, search structures, hashing, heaps, sorting algorithms, and graph algorithms. Data structure and algorithm combinations will be studied and analyzed along with their relative merits using both mathematical and empirical measurements. The course includes a number of large programming assignments focusing on object-oriented software engineering and algorithm development. Students will be required to design, implement, test, and analyze their programs in at least one object-oriented language. 2.0 hours activity, 3.0 hours lecture.

Note: Programs will be implemented in C++

<table>
<thead>
<tr>
<th>Class #</th>
<th>Section</th>
<th>Act</th>
<th>Days</th>
<th>Times</th>
<th>Room</th>
<th>Instructor</th>
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<tbody>
<tr>
<td>3254</td>
<td>CSCI 311-01</td>
<td>LEC</td>
<td>TR</td>
<td>0330-0445</td>
<td>OCNL 254</td>
<td>Dr. J (<a href="mailto:Juliano@csuchico.edu">Juliano@csuchico.edu</a>)</td>
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<td></td>
<td>CSCI 311-02</td>
<td>ACT</td>
<td>T</td>
<td>0500-0650</td>
<td>OCNL 251</td>
<td>T. B. A.</td>
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Instructor Information  
Dr. Juliano (a.k.a. Dr. J)  
http://www.ecst.csuchico.edu/~juliano

Office Hours:  
OCNL 222 (days/times published online)  
Tel 530 898-4619 / 6442 (dept office)  
Fax 530 898-5995  
Appointments and walk-ins welcome.

Recommended Textbook (available through Safari online)  
Algorithms in a Nutshell, 1/e  
O’Reilly Media, Inc.  
ISBN: 978-0596516246

Additional Requirements  
1. Clickers (Student Response Systems) are required in this class; students are required to have their own Clicker by the end of the second week of classes to guarantee enrollment in class. Details of Clicker use will be covered during the first two weeks of classes.
2. Students are expected to maintain their Chico State Connection (CSC) Portal (see http://portal.csuchico.edu) account to regularly access and update themselves via the on-line calendar, current scores, discussion board, etc.
3. Students are expected to familiarize themselves with Dr. J’s general policies and expectations as detailed online at /~juliano/Teaching/Policies.html – particularly those dealing with Academic Integrity.
4. Students will also be exposed to ACM ICPC-style programming contests in the lab. Participation in these activities is required of all students.

Grade Evaluation  
<table>
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<tr>
<th>Theoretical Component (50%)</th>
<th>Practical Component (50%)</th>
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<tbody>
<tr>
<td>25% Participation in lecture (recorded via Clickers)</td>
<td>30% Participation in labs (via ICPC-like sessions)</td>
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<tr>
<td>30% Midterm, Tue, March 9, 3:30 – 4:45 (in-class)</td>
<td>70% Programming Assignments</td>
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<tr>
<td>45% Final Exam, Thu, May 20, 2:00 – 3:50</td>
<td>See the on-line syllabus for details of final grade calculation.</td>
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Additional Information  
http://www.ecst.csuchico.edu/~juliano/csci311/  
http://www.ecst.csuchico.edu/~juliano/C++  
http://vista.csuchico.edu  
http://cm.baylor.edu/