

CSCI 311: Algorithms and Data Structures Abbreviated Syllabus for Spring Semester 2011

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++

Class #	Section	Act	Days	Times	Room	Instructor
3336	CSCI 311-01	LEC	TR	0330-0445	OCNL 254	Dr. J (Juliano@csuChico.edu)
	CSCI 311-02	ACT	T	0500-0650	OCNL 251	

Instructor Information

Dr. Juliano (a.k.a. Dr. J)
<http://www.ecst.csuchico.edu/~juliano>

Office Hours: **OCNL 415** (*days/times published online*)
Tel 530 898-4619 / 6442 (dept office)
Fax 530 898-5995
Appointments and walk-ins welcome.

3. Students are expected to familiarize themselves with Dr. J's general policies and expectations as detailed online at [/~juliano/Teaching/Policies.html](http://www.ecst.csuchico.edu/~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.



acm International Collegiate Programming Contest

Recommended Textbook

 (available through *Safari* online)


Algorithms in a Nutshell, 1/e
G.T. Heineman, G. Pollice,
and S. Selkow, 2008.
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 gradebook scores, *etc.*



Grade Evaluation

Theoretical Component (50%)	
30%	Lecture Participation (recorded via <i>Clickers</i>)
30%	Midterm , Tue, Mar 8, 3:30 – 4:45 (in-class)
40%	Final Exam , Thu, May 19, 2:00 – 3:50
Practical Component (50%)	
30%	Lab Participation (Lab work & <i>ICPC</i> -like sessions)
70%	Programming Assignments

See the on-line syllabus for details of final grade calculation.

Additional Information

<http://www.ecst.csuchico.edu/~juliano/csci311/>
<http://www.ecst.csuchico.edu/~juliano/C++>
<http://vista.csuchico.edu>
<http://cm.baylor.edu/>