# CSCI 230 001

# Data Structures and Algorithms Syllabus

Fall 2012

Instructor:

Dr. Jim Bowring: <a href="http://www.cs.cofc.edu/~bowring/">http://www.cs.cofc.edu/~bowring/</a>

Office: J.C. Long (LONG) 222

Tel: 843.953.0805
Google Voice: 843.608.1399
Google Chat: bowring@gmail.com

*E-mail*: Please use <a href="mailto:BowringJ@cofc.edu">BowringJ@cofc.edu</a> with SUBJECT = "CSCI230" <a href="mailto:OFFIce hours">OFFIce hours</a>: MW: 10:00 – NOON; TR: 3:00-4:00; or by appointment

Class place and time:

Classroom: Bell 415 Time: TR 10:50 - 12:05 PM

# **Catalog description**

CSCI 230 – Data Structures and Algorithms – This course develops abstract data types as mathematical models. Data structures and algorithms are developed as the objects and operations of abstract data types. Topics include lists, stacks, queues, trees, graphs, searching, sorting, and analysis of the efficiency of algorithms. Lectures three hours per week.

Prerequisites: CSCI 221 and MATH 207.

# **Course Description with Course Outcomes**

http://www.cs.cofc.edu/~bowring/classes/csci%20230/fall%202012/CourseDescriptionCSCI%20230%202011.pdf

# Required text

<u>Data Structures and Algorithms using Java</u>, 1st Edition, by William McAllister, Jones & Bartlett, 2009. CofC Bookstore: \$130 used; \$173 new.

# Required tools:

A computer supporting Java SDK and Netbeans, internet access, CofC Google Apps, CofC student email, etc.

# **Electronic Resources**

- 1) Class Website
- 2) Textbook Student Resources
- 3) Netbeans
- 4) Java SDK
- 5) Google Scholar
- 6) The College of Charleston <u>Libraries</u> supply free full access to a wide range of electronic resources, including the <u>ACM Digital library</u> and the <u>IEEE Computer Society Journals</u>.
- 7) Center for Student Learning
- 8) Career Planning Guide provided by the <u>Career Center</u>
- 9) <u>Ubuntu, Subversion, VirtualBox</u>

# **Professional Development:**

I highly recommend that you join either the Association for Computing Machinery (ACM = \$19 for a student) or the Institute of Electrical and Electronics Engineers (IEEE) Computer Society. Both offer student memberships. We have a College of Charleston student chapter of the ACM, which you are encouraged to join and attend. In your professional career as a software engineer / architect, your employers will likely expect you to maintain one or the other of these memberships.

#### Attendance, class participation, and oral presentations:

Your active participation will lead to your success and to the success of the class. I expect you in class on time and well-prepared by having read the assigned readings and having submitted the required assignments. Some graded assignments will be done in class. You may be asked to present your software solutions to the class.

Please do not attend class if you are sick or believe you are becoming ill. It is best to document your absence through an absence report in Undergraduate Academic Services.

The College requires attendance to be taken for every class session.

# Homework and assignment policy:

All assignments are due when specified on the class website. I will also specify how you must name and submit each assignment. Each assignment must be professional in appearance with your full name and other pertinent identifying information embedded in the document(s).

#### Instructor availability

I am here to teach, advise, and assist you. I maintain an open-door policy, so feel free to step into my office. Knock if the door is closed. I will respond to your emails or chats (see above.)

#### **Disabilities:**

If you have a documented disability and are approved to receive accommodations through <u>SNAP Services</u>, please contact me during office hours or by appointment.

#### **Student Conduct:**

I expect you to abide by <u>The College of Charleston Student Handbook</u>, which includes sections on conduct and the Honor Code. If you have a question about how to interpret the Honor Code, ask before acting! I encourage collaboration on assignments and projects, but you must document the collaboration with the names of your collaborators and the location of any sources you relied upon in performing the assignment.

# **Grading scale:**

100-90 (A); 89-80 (B); 79-70 (C); 69-65 (D); else (F). Plus/minus grades given by instructor discretion.

# **Evaluation schedule**

- 10% Class preparation and participation including quizzes and writing assignments
- 10% Test #1
- 15% Test #2
- 40% Homework and Projects including in-class oral presentations
- 25% Final exam