



**INFORMATION TECHNOLOGY EDUCATION  
PROGRAMMING & ANALYSIS  
COURSE SYLLABUS**

<b>Course Title and Number:</b> Data Structures COP2535 all sections		<b>Instructor:</b> Debbie Reid	
<b>Year and Term:</b> Fall 2017	<b>Course Credits:</b> 03	<b>Office Location:</b> N-210	
<b>Office Phone:</b> (352)395-4402	<b>Office Hours:</b> See instructor web page	<b>Class Location:</b> Section 0M1: online section – no campus requirement	
<b>Meeting Time/Days:</b> N/A		<b>Email Address:</b> debbie.reid@sfcollge.edu	
<b>Web Page Address:</b> <a href="http://home.ite.sfcollge.edu/~debbie.reid">http://home.ite.sfcollge.edu/~debbie.reid</a>		<b>Fax Number:</b> 352.395.4154	

<b>Course Description</b>	This course will focus on the design and analysis of data structures and the use of algorithms. Through the introduction of the most widely used data structures employed in solving commonly encountered problems, such as linked lists, binary trees, queues, and stacks, students will learn different ways to organize data for easy access and efficient manipulation. Algorithms to solve classic problems, such as searching, sorting, hashing, and graph algorithms will also be presented. This course assumes the student has a basic understanding of object-oriented programming in the C++ or Java programming language.
<b>Prerequisites</b>	COP2000 with a grade of C or higher.
<b>Course Objectives Reflecting <u>Expected Student Learning Outcomes</u></b>	<ul style="list-style-type: none"> <li>• Understand the goals of software design</li> <li>• Describe and utilize an ADT</li> <li>• Use unsorted lists to implement utility routines</li> <li>• Use sorted lists using an array-based implementation</li> <li>• Understand and implement stack operations</li> <li>• Demonstrate the effect of queue operations</li> <li>• Implement linked lists as an array of records</li> <li>• Demonstrate how a binary tree can be represented in an array</li> <li>• Implement a heap in a nonlinked tree representation in an array</li> <li>• Compare the efficiency of the sorting and searching algorithms</li> </ul>

## Grading

### Course Requirements:

Students who need reasonable accommodation should contact the instructor or call the **Disability Resources Center at 352-395-4400**.

### Policies on Missed Exams and Late Work:

- One project grade or one exam grade will be dropped from final grade computation.
- All exams will be scheduled in advance over a period of several days. No make-up exams will be given.
- All projects and project due dates are posted in advance. No late project submissions will be allowed.

### Grading Scale and Standards:

Grade Scale	
90 – 100	A
85 – 89.9	B+
80 – 84.9	B
75 – 79.9	C+
70 – 74.9	C
65 – 69.9	D+
60 – 64.9	D
< 60	F

Grade Calculation	
<b>Projects</b>	<b>45%</b>
<b>Exams</b>	<b>45%</b>
<b>Final Exam</b>	<b>10%</b>
<b>Total</b>	<b>100%</b>

### Important Information

For classes that meet on campus, attendance is required. Regular attendance will be critical to success in this course. It will help guide you toward successful completion of your projects and assignments. Students are responsible for getting all work and lecture notes missed due to absence.

All sections of this course will use the Canvas online classroom. This is where you will go to get assignments, check due dates, take your exams, upload your projects, communicate with your instructor and classmates, and participate in discussions. In an online course, your attendance is required via your participation in Canvas discussions or email, as specified by the instructor. You must log on to Canvas at least twice a week and check for any new information and/or updates

You must turn in all Projects on the due date by the time and method indicated in the instructions. No extensions are given; therefore you must make sure to start on assignments early. It is understood that computers are not perfect. However an excuse such as, "the computer wasn't working" is not acceptable because you can always use another computer in the labs provided at Santa Fe College. ***Absolutely no late Projects are accepted.***

	<p>Finals week will consist of meeting at the designated time and taking a Final Exam. Online students will take the Final Exam online.</p> <p>All Exams will be announced in advance. <b>No</b> make-up Exams will be given under <b>any</b> circumstances.</p> <p>You have one week from the time a homework or exam grade is posted to contest your grade. You must make your case for points you think you deserve in writing through Canvas email. After that time, your grade will stand.</p> <p>Assignments must be organized and submitted following the course guidelines and in the specified format. Depending on the assignment this might include any or all of the following: submitting a printout, uploading to the Web, sending via email, or uploading to a Canvas Dropbox. Methods other than those specified by your instructor are not acceptable.</p> <p>All work must be completed using <b>Microsoft Visual Studio.NET</b>. <b>Visual Studio.NET</b> is a free download. Note that if you submit work completed in programs other than the designated ones, the assignment cannot be accepted.</p> <p>If you are working on assignments at home, it is your responsibility to maintain your computer system. Requirements cannot be waived due to problems with your hardware, software, or Internet connection. Campus labs can be used to complete your work.</p>
<b>Text(s)</b>	<p><b>Text(s), Title(s), Author(s) and Edition(s):</b></p> <p><i>Starting Out with C++ Early Objects</i>, by Gaddis, Walters, and Muganda, 9<sup>th</sup> edition, ISBN: 978-0-13-336092-9</p>
<b>Required Course Materials</b>	<p><b>Software requirements:</b></p> <p>All materials including tutorials and links to supplementary readings, are available for free from the ITE department, online, or posted on Canvas. You can print any assignment, activity or reference if you wish.</p>
<b>Course Software</b>	<p>In order to stay in compliance with all copyright laws, download Microsoft Visual Studio.NET from only Microsoft.com.</p>
<p><b>Term Calendar</b>  <i>(Tentative: The instructor reserves the right to alter dates of presentations and exams/projects.)</i></p>	<p><b>Topics to be Covered and Corresponding Chapters in the text:</b></p> <ul style="list-style-type: none"> <li>• Classes and Objects</li> <li>• Arrays</li> <li>• Searching and Sorting Algorithms</li> <li>• Recursion</li> <li>• Linked Lists</li> <li>• Stacks and Queues</li> <li>• Binary Search Trees</li> </ul>

<b>Syllabus Agreement</b>	Send your instructor a Canvas email stating the following: <i>"I have read, understand, and agree to the course syllabus"</i> no later than the first week of class.	
<b>List of Important Dates</b>		
	Aug 21	Class begins
	Aug 25	Last day to Drop with no record and get a refund
	Sep 4	Labor Day – Campus Closed
	Oct 6	UF Homecoming – Campus Closed
	Oct 30	Last day to withdraw with a 'W'
	Nov 10	Veterans Day – Campus Closed
	Nov 23 – 24	Thanksgiving Day Holiday – Campus Closed
	Dec 1	Classes end



## INFORMATION TECHNOLOGY EDUCATION

### Policies and Guidelines

Please note that components marked with asterisk (\*) require specific language.

#### **Cell Phone Use Policy**

Given the disruptive potential posed by cell phones, students are required to keep cell phones off during class lectures. Use of cell phones during lab exercises are permissible, but please consider those around you

#### **\*Children in the Classroom**

Children represent a disruptive element for the classroom. They also increase the risk of accidents occurring in the lab. For those reasons, children should not be brought to either the classroom or the laboratory.

#### **\*Academic Honesty: Plagiarism And Cheating**

Academic honesty is expected, and the instructor reserves the right to respond to cheating, plagiarizing, or other forms of unethical behavior with penalties up to and including removal from the class and/or failure in the course. The instructor also reserves the right to make necessary adjustments to the syllabus.

#### **\*Academic Ethics and Confidentiality**

It is the responsibility of everyone engaged in the learning experience to respect the rights and feelings of their fellow learners. Information gathered in the classroom and from on-line discussions and exercises is to be considered confidential. At the same time, students must recognize that the instructor and the College cannot guarantee the confidentiality of what the student may choose to disclose. Students must use their own discretion when engaging in classroom discussion.

**\*Classroom Behavior**

Instructors have the responsibility to set and maintain standards of classroom behavior appropriate to the discipline and method of teaching. Students may not engage in any activity which the instructor deems disruptive or counterproductive to the goals of the class. Students are required to keep cell phones off during class lectures, unless there is permission in advance from the instructor. Instructors have the right to remove offending students from class. Repetition of the offense may result in expulsion from the course. Students are expected to be courteous to others and that includes coming to class on time.

**\*Student Conduct**

Opt #1: Students must read and be familiar with the Code of Conduct as published in the Student Handbook, policies and procedures as outlined in campus publications, Santa Fe policies.

Opt. #2: Students in this (or any) program of study should be especially aware of the severe consequences of plagiarism. Students that submit work that is not their own will be dealt with quickly and severely.

Opt. #3: Students that have a concern regarding any inappropriate conduct should bring it to the attention of their instructor or Department Chair immediately. Inappropriate conduct situations will be reviewed immediately.

Opt. #4: Students taking this course should be aware of the potential diversity of the artistic perception of the participants - particularly as applicable to violence, artistic statements, and nudity. Please keep your material and remarks professional and appropriate and be sensitive to individuals that have views different than your own.

**\*Student Rights and Responsibilities**

The purpose of this document is to provide students with a general overview of both their rights and responsibilities as members of the Santa Fe College community. For a complete list of students' rights and responsibilities go to:

[:http://www.sfcollege.edu/studentaffairs/index.php?section=policies/student\\_rights](http://www.sfcollege.edu/studentaffairs/index.php?section=policies/student_rights)

**\*Americans with Disability Act – Disability Accommodation Statement**

If you are a student with a disability: In compliance with Santa Fe College policy and equal access laws, I am available to discuss appropriate academic accommodations that you may require as a student with a disability. Requests for academic accommodations need to be made during the first week of the semester (except for unusual circumstances) so arrangements can be made. You must be registered with Disabilities Resource Center (DRC) in S-229 for disability verification and determination of reasonable academic accommodations. For more information, see:

[http://www.sfcollege.edu/student/drc/index.php?section=faculty\\_resources/rights\\_responsibilities](http://www.sfcollege.edu/student/drc/index.php?section=faculty_resources/rights_responsibilities)

**\*Discrimination/Harassment Policy**

SF prohibits any form of discrimination or sexual harassment among students, faculty and staff. For further information, refer to College Rule 2.8 at:

[http://dept.sfcollege.edu/rules/content/media/PDF/Rule\\_2/2\\_8.pdf](http://dept.sfcollege.edu/rules/content/media/PDF/Rule_2/2_8.pdf)