

Syllabus for COP 2000 - Reference # 106655

COURSE INFORMATION

Scope:

The course teaches the techniques necessary to develop well-documented structured computer programs. Emphasis is on analysis and problem solving technique, but students also will be coding programs using the computer programming language C.

Recommended Prerequisites:

MAT 1033 - Intermediate Algebra

The algebra prerequisite is recommended because that topic introduces the concept of *symbolic logic* which is used extensively in programming. Symbolic logic uses labels made from symbols such as X or Y to represent items of data such as a value or some text. Do not be concerned that the algebra prerequisite implies extensive use of mathematical formulas in this course. If you can calculate a total, average, and percentage - that should be sufficient.

Basic Internet Literacy

The skills required here include the ability to: connect to the Internet, browse the Web, and send and receive email with attachments.

Expected Course Outcomes: At the completion of the course, students should be able to:

- Analyze a problem for computer solution using the top-down approach and design a structured algorithm to solve it.
- Determine appropriate data types for storage of program variables.
- Draw a flowchart and/or write pseudocode defining a problem solution.
- Code, debug and test a program corresponding to a flowchart or pseudocode using the C Programming Language.
- Complete the top-down program development process of problem definition, algorithm planning, program coding, debugging, testing and documentation.

Assessment of Learning Outcomes:

Learning outcomes are determined by measuring the ability of each student to accomplish the learning objectives of the course as measured against industry standards, job descriptions, and state curriculum frameworks. The assessment tools used for this course include observation of mastery of critical skills and performance-based methods, such as completion of discussion posting activities, assigned projects, and online quizzes and a written final exam consisting of either essay, multiple-choice, true/false or fill-in-the-blank questions.

Dates: Aug. 28 - Dec. 18, 2007 - Tuesdays: 5:30 - 8:00 p.m. (See the [Course Schedule](#) below)

Textbook:

[Problem Solving & Program Design in C, Fifth Edition](#) (Third or Fourth Editions are also acceptable), by Jeri R. Hanly and Elliot B. Koffman, [Pearson Addison-Wesley](#), ©2007, ISBN 0-321-40991-4.

Required Materials:

- Two [Magnetic Storage Diskettes](#): 3.5 inch, double sided, 720 KB or 1.44 MB capacity. These can be obtained at the IRCC Bookstore, office supply stores, or computer stores. The disks should be used solely for this course.
- At least one 9" x 12" [clasp envelope](#) (any color) for project submission.

Web Site Addresses:

Author's Web Site: <http://www.aw-bc.com/catalog/academic/product/0,1144,0321409914,00.html>

Instructor's Faculty Web Page at IRCC: <http://faculty.ircc.edu/FACULTY/rgibson/>

COP 2000 Course Home Page: <http://www.gibson.vero-beach.fl.us/classes/cop2000/>

INSTRUCTOR INFORMATION

Name & Department: Randolph Gibson, Computer Science

Office Location: V 424 (Main Campus) - 3209 Virginia Avenue, Ft. Pierce, FL 34981

Office hours: For latest schedule, view the web page at

<http://www.gibson.vero-beach.fl.us/classes/contact.html>

Phone Numbers:

Residence (Vero Beach) - 772-234-8941 (7 a.m.- 10 p.m.)

Main (Fort Pierce) Campus: 772-462-7620 (from outside S.L. County, dial: 866-866-4722 Ext. 7620)

Mueller (Vero Beach) Campus: 772-226-2500

College E-mail Address: rgibson@ircc.edu

STUDENT RESPONSIBILITIES

Participation:

You are expected to participate in each class meeting and will be tested on text *and* lecture content. It is your responsibility to notify me if you miss the daily roll call and to get the lecture notes from a classmate. Bring your textbook, a **pencil**, notepaper and one of your class diskettes to each class meeting. The maintenance and security of your textbook and storage media is your responsibility. The loss of these items does not exempt a student from his or her class/homework responsibilities.

Interruptions:

Portable electronic devices such as cellular phones, pagers, PDA's, media players, etc. must not be used during class. If you need to be reached at the college, use the following numbers:

- Daytime classes: Dean of Students 772-462-4706
- Night classes: Campus Security 772-462-4755

Contact:

You are responsible for keeping me informed of changes in your contact information. A password protected, web-based email account related to this course has been established for you on the IRCC Distance Learning Server to allow you to maintain contact with your instructor and to receive important notices from the college. This server is controlled by software named "Blackboard" (formerly known as "WebCT"). Instructions for [using Blackboard](#) and for [logging into your account](#) can be found under the [E-Learning area of the IRCC Web Site](#). To ensure that you are accessible this semester, you must send me an email message using the Blackboard system within the first week of class that includes the following information: the course and reference number, your name, your phone number, and your county of residence. *Please also [maintain your personal contact records with the college](#) via the [Online Registration Page of the IRCC Web Portal](#).*

Assignments:

- You must do all assignments alone! Plagiarism will not be tolerated and will result in severe disciplinary action.
- All assignments must be completed in order to pass the course. Note this well! A student with A's on every exam and project will fail the course if they have not completed all assignments by the deadline for the final one. You might be asked to resubmit work after it is critiqued to ensure that you have mastered important concepts and skills. Assignments are not considered completed until accepted.
- Only assignments that you submit at the *start* of class on their scheduled due dates will earn credit.
- Label everything: [diskettes](#), papers, etc.
- Put it all in a standard 9" x 12" [clasp envelope](#) (any color). Do *not* seal it. Do *not* put diskettes in plastic protectors. Label the envelope with at least: your name, the course & reference number, and the date.
- **Keep a copy of all work submitted.** Either copy individual disk files from one storage device to another (using Windows Copy and Paste commands) or [make a backup copy of your entire disk](#).

Labs:

You will *not* be given time to work on programs in class. You should use the IRCC Computer Labs (in Room V 125 on the [Main Campus](#), Room J 211 on the [St. Lucie West Campus](#), Room 19 in [Stuart](#), and Room V 114 in [Vero Beach](#)) at times as noted on the lab doors. The Student Assistants who supervise the labs are there to provide general guidance in using lab equipment, but are not expected to be familiar with all software used in each course. See your instructor during [office hours](#) for help on software and other class topics. Students are **not** required to purchase the compiler software used for this course. Students who prefer to write and test their code at home can either install and use the compiler that comes on the CD-ROM bundled inside the textbook or can download the free LCC-Win32 Compiler from the University of Virginia web site at:

<http://www.cs.virginia.edu/~lcc-win32/>

Grading:

Most importantly: **All projects must be completed to the satisfaction of your instructor prior to the final exam period for you to pass the course.** You can earn a total of 300 points in this class. Each exam (including the final exam) will be worth 100 points. For every project that you complete and submit on time, one bonus point will be added to your overall test score total. Final grades result from the total points each student earns divided by the total points available, based on the scale: 100-90% = A, 89-80% = B, 79-70% = C, 69-60% = D, 59-0% = F. Final grades are posted to the college website shortly after the last day of final exams at the web address:

<http://webregl.ircc.edu/FCCSC/navigate/student.jsp>

Exams:

No more than 1 exam may be made up. The make-up item might be more difficult than the original. You must contact your instructor and schedule and take the make-up no later than 7 days after the original. The final exam cannot be made-up without an Incomplete (I) grade. Make-up exams will be given in the [IRCC Assessment Center](#). You must take a photo ID (preferably a license) to the [IRCC Assessment Center](#) to take a test or complete an assignment.

Withdrawal:

If you feel the need to withdraw, please speak with me about alternatives. You will *not* be automatically withdrawn if you stop coming to class. Withdrawal requires that *you* submit an official IRCC form through an Educational Services office on any campus or through online submission at:

<http://webregl.ircc.edu/FCCSC/navigate/student.jsp>

Degrees & Certificates:

This course is a requirement of the Computer Information Technology A.S. Degree program at IRCC. You are strongly encouraged to consider the advantages of completing a Technical Certificate or an Associate Degree. Check with your counselor to see how close you may be to increased earning potential.

Publications:

The college provides extensive information to help students succeed. A list of links to some of the most important information can be found at

<http://www.gibson.vero-beach.fl.us/classes/ircclinks.html>

Professionalism:

Students enrolled in IRCC's Computer Science courses are encouraged to develop their professional character through participation in the local chapter of the national student organization, [Phi Beta Lambda](#). For more information, contact Professor Terri Holly <tholly@ircc.edu> at 772-462-7669.

COURSE SCHEDULE

An average student should expect to spend at least as much time studying outside of class as spent in class. Review the schedule in advance to determine any conflicts that may arise regarding holidays or travel plans. Realize that all posted dates are **deadlines** for activities that you will be performing in the class. You are welcome to submit work early. Try to stay **ahead** of the schedule; don't just keep up with it. Contact me immediately if you cannot meet a deadline.

Reading involving either the textbook or [online chapter notes](#) should be completed before attempting any assignment or exam. Exercises and review questions within the textbook are useful, but will not be submitted for grading in this class.

This schedule and any changes to it will be posted on the course web site. You also are advised to review the [web pages regarding academic schedules](#) on the [IRCC web site](#).

Deadline	Textbook Chapter	Online Reading / Activity	Assignment/Quiz/Exam
T 8/28	1	An Overview About Problem Solving, Data Types & Language , and Analysis of a task involving sequential structure	Plan something "proactive"
T 9/4	2.1-2.3	Overview of C Data Types in the C Programming Language , Symbolic Constants and Variables , and <i>Hands-on: Using a C Compiler</i>	Examine Web Resources
T 9/11	2.4-2.6 & 2.8	Expressions & Operators in C , Output Formatting in C , and Coding a task involving sequential structure <i>Hands-on: Syntax & Debugging</i>	(1) Sequential Analysis Project
T 9/18	3.1-3.6	Top-Down Design: Functions & Parameters	(2) Sequential Coding Project
T 9/25	1 - 3	Review Chapters 1-3	(3) Procedure Project
T 10/2	4	Selection Control Structures: Flowcharting Symbols & Guidelines , Example of a Selection Structure Selection Structure Using the if Statement How to Pause a Program	Exam I: Chapters 1 - 3
T 10/9	4 Cont'd.	Selection Using the Case Selection Structure Coding the Case Selection Structure , Tips on Reading Characters in C , Displaying Special Characters in C , and Clearing a Screen in C	(4) Selection Analysis Project

Deadline	Textbook Chapter	Online Reading / Activity	Assignment/Quiz/Exam
T 10/16	5.1-5.7	Repetition (Loop) Control Structures: Accumulation	(5) Selection Coding Project
T 10/23	5.8-5.11	Do-While Loops & Flag Control and Counting Loop	(6) Loop Analysis Project
T 10/30	4 - 5	Review Chapters 4 & 5 and <i>In-Class Work Day</i>	(7) Loop Coding Project
T 11/6	6	Modular Programming (w/Chap. 3 revisited): Functions & Parameters Explained , Separate Procedures , & Pointers & Indirection	Exam II: Chapters 4 & 5
T 11/13	7.1-7.3 & 7.5 and 8.1-8.5	Array Declaration and Manipulation An Example of a Program Using Arrays	(8) Modular Program Project
T 11/20	8.6-8.9	Searching & Sorting Arrays and Generating Random Numbers in C	
T 11/27	9.1-9.6	Strings and See Correction to textbook page 443 about the gets() function	(9) Array Coding Project
T 12/4	9.7-9.9	String Conversions	(10) String Project
T 12/11	7-9	Review Chapters 6 - 9	
T 12/18	Final	Note time: 5:30 - 7:30 p.m.	Final Exam: Chapters 6 - 9

Last Revised: 21 August 2007

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www.gibson.vero-beach.fl.us/classes/cop2000/fall/cop2000t_07.html

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