CIS163AA Java Programming: Level I
Spring 2005

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Class Time: Section 5686– Wed 4:00 PM – 6:40 PM
January 19, 2005 - May 10, 2005

Class Room: C104 - Pecos Campus
Instructor Office: E208 – Pecos Campus
Instructor Office Hours: Office and Lab Hours

Business/CIS Division Telephone Number: 732-7043
Advisement: 732-7317

[CSC110 Syllabus] | [CIS163 Syllabus] | [General Information] | [Schedule] | [Instructor]

Description

This course serves as an introduction to Java programming. Includes features needed to construct Java Applets, Java Applications, control structures, methods, arrays, character and string manipulation, graphics, and object-oriented design.

Prerequisite

Required: CIS105

You will need a basic background in computers. CIS105 - Survey of Computer Information Systems or BPC110 - Microcomputer Usage and Applications provide this background. I expect you to be comfortable using the Microsoft Windows operating system and Windows-based applications. Make sure you are able to:

- create, delete and move folders
- save, delete and move files
- print
- browse the internet
- send and receive email and have an email account

Consider this alternative - CIS150

If you find that CIS163AA is more fast-paced and time-consuming than you might prefer, we offer a course which covers programming topics at a slower pace: CIS150 Programming Theory. Some students find they can lower their frustration, reduce their time commitment and improve their grade in this course by first taking CIS150. Intended for beginners, the course covers the following topics at a more leisurely pace than does CIS163AA:

- Select structure, including nested decisions and Boolean logic
- Case structure
- Loop structure, including sentinel value, count-controlled and nested loops
- The field, record and file approach to data organization.
- Stepwise refinement
- Input validation
- Hexadecimal and binary number systems; ASCII character encoding
- Introductory object-oriented programming concepts and terminology
- At least one procedural program design tool: flowcharting, pseudo code, IPO charting and/or structure charting
- Program documentation

Students who successfully complete CIS163AA should be able to:

- Explain the development of Java applications.
- Explain the control structures in Java.
- Utilize Methods and Arrays in Java.
- Utilize string and character manipulation in Java.
- Utilize Object-Oriented programming concepts in Java.
- Utilize Basic and Advanced Graphical User Interface Components.
- Identify and debug common mistakes in programs written in Java.

ASU Transfer Information for CIS majors

This course prepares you to take upper-division CIS courses at the ASU Main College of Business. CIS majors transferring to ASU should take both CIS159/CSC181 Visual Basic (CSE181 at ASU) and CSC110AA/CIS163AA Java Programming (CIS235 at ASU). I recommend that you always meet with an advisor to discuss course selection as requirements may change.

CGCC's course titles and prefixes are different from those at ASU. To help you transfer successfully, we have developed Associate in Transfer Partnership (ATP) programs in conjunction with ASU. They show the correct courses to take. You may find the ATP course lists here on ASU's advising website.

Admission to the CIS professional program at ASU is very competitive. I urge students to maintain an A average in the "skills courses" required to gain admittance to the professional program in the College of Business at ASU. Watch the ASU advising website for application availability dates. Again, please meet with an advisor to assist you in meeting application criteria and deadlines - it can be tricky!

Official District Curriculum

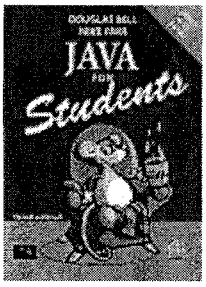
Official Course Descriptions, Competencies and Outline for CIS163AA.

[CSC110 Syllabus] | [CIS163 Syllabus] | [General Information] | [Schedule] | [Instructor]

General Syllabus Information

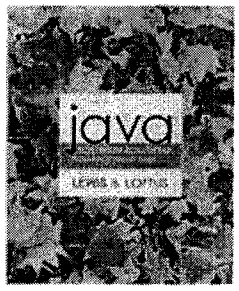
[CSC110 Syllabus] | [CIS163 Syllabus] | [General Information] | [Schedule] | [Instructor]

Textbook

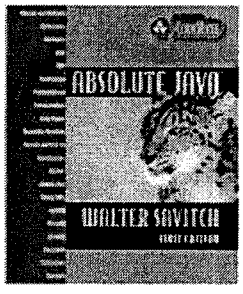


Bell, Douglas and Mike Parr. *Java for Students*. 3rd edition. Essex, England: Prentice Hall Europe. ISBN: 0130323772.

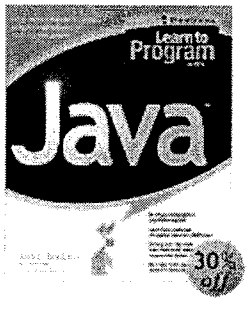
If you like to have other books to reference, you might consider these (optional, of course):



Lewis & Loftus. Java Software Solutions. 4th edition. Pearson. ISBN: 00321245830. This book is the best-selling introductory java text and is the text that ASU uses. Includes a free 6 month subscription to CodeMate, the online java tutorial feedback system that analyzes your code and provides specific feedback.



Savitch, Walter. Absolute Java. Addison-Wesley. ISBN: 0321205677. This well respected author writes top-notch programming books. This book goes into more depth than the others and better explains why things are done the way they are in java. Includes a free 6 month subscription to CodeMate, the online java tutorial feedback system that analyzes your code and provides specific feedback.



Smiley, John. *Learn to Program with Java*. Osborne McGraw-Hill. ISBN: 0072131896. This book is for students who need a different approach to learning programming. When frustrated beginning programmers try one of John's books, they usually rave about them. His books are unlike any programming books you've ever seen. Go to amazon.com and view the excerpt from his book and you'll see what I mean.

- Deitel, H. M., Deitel, P. J. *Java: How to Program.* 5th edition. Prentice Hall. ISBN: 0131016210. This is a more comprehensive textbook that covers additional topics.Schildt, Herb.
- *Java 2: The Complete Reference*, 5th Ed. McGraw Hill - Osborne. ISBN: 007222420. This is a reference book with some explanation. Most java reference books assume you already know the java classes and are looking to be "reminded" of a method or parameter. This reference book organizes the reference material by subject and provides explanations and examples for each referenced topic.

Supplies

- 1 - 1.44mb floppy disk formatted for IBM to turn in your completed mid-semester project.
- One of the following to store your programs and data:
  - **Flash memory/Jump Drives.** Flash memory (used in cameras and mp3 players in various forms) is much faster and stores much more than floppies. Flash memory drives plug into a computer's USB port and provide 16mb - 512mb of portable storage. Here's an example unit. Check the Sunday paper ads to find great deals for under $30. Note: some older computers manufactured prior to 2000 may not have USB chipsets that work well enough to use Flash memory devices. If you have an older computer, you will probably have to use floppy disks.
  - **Floppy disks**. You'll need 2 or more additional floppy disks to store your work.

Make sure that you back up your work regularly. Media does fail, and when it does it is always right before you need to hand in your assignment!

Hardware required

On Campus: There is a Computer Lab on campus that you can use to complete your assignments for this class. It is located in B123. Students in this course must use the machines in Zone 1, located on the east side of the room. You will need to show your student ID and course schedule to use these computers. The lab assistants can help you locate these machines if you have trouble.

At Home: If you plan to do your work at home, you will need a computer with with the following characteristics:

- Pentium 233 or better CPU.
- 64mb or better RAM.
- 200mb free hard drive space on your boot drive.
- A printer is desirable so you can print assignments at home instead of in the lab.
- Internet connectivity so you can view this web site at home as well as in the classroom and lab.

Software required

Most of your out-of-class time will be spent compiling and editing your Java programs. If you plan to work in the lab, we have computers that have been set up with all the needed software. If you plan to work at home, however, you'll need the the java SDK and a program editor.

- We provide this software on a cd that we distribute during the first week of class. Install instructions for the cd.
- You can also download slightly newer versions of the software from the internet.
    - Download J2SE™ v 1.4.2 (free). Download the "SDK" (not the JRE) for "Windows - offline installation"
        - Install instructions
    - Download Java SDK docs (free). Download "J2SE 1.4.2 Documentation"
        - Install instructions
    - Download Textpad 4.7.3 (shareware, $27. CGCC has licensed the product for student use and you may use the product without purchasing it while enrolled in a java course.)
        - Install instructions. Important note: textpad MUST be installed AFTER the java SDK. If you already have textpad installed, first uninstall textpad. (When you click on the textpad install package, it will give you "uninstall" as one of the options.)
        - Configure textpad
- Or, if you like, you may use a UNIX-based system to complete the homework.

Assessment

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ased on points accumulated during the semester. Points are given for:

Attendance/Participation	50
Assignments	100
Quizzes	50
3 Exams:	300
Final Exam	100

Grading Scale

90 – 100%	A
80 – 89%	B
70 – 79%	C
60 – 69%	D
Below 60%	F

Assignments

Assignments are collected at the beginning (within the first 5 minutes) of class. Assignments anded in after the beginning of class, but on the due date, will incur a late penalty. Please have your ograms printed before class begins. **I do not accept homework after the due date.** If you know that you will be late or absent on the date that an assignment is due, you may email me the assignment **before** the start of class. My email address is patricia.baker@cgcmail.maricopa.edu.

Frequently, I will have you demo your program instead of handing it in. It is better to hand it what you have on time, even if it is not complete, because you can receive credit if your work shows substantial effort. I recommend working with other students to figure out tough problems, but every student must hand in their own work. It helps to have email addresses and phone numbers of fellow students so that you can quickly find help.

I expect that students will spend a considerable amount of time in preparation outside the class. It is not unusual to spend four hours of preparation time for each hour spent in the classroom. Your hours of outside preparation should be devoted to completing computer assignments, reading the chapter material, and taking notes. It is difficult to be successful in this class if you have not completed your homework and do not come to class prepared.

Quizzes

- Quizzes are designed to reward you for attending class on time, reading the chapter and working to understand the conceptual material. This class is about more than just successfully writing programs. You are expected to work to gain a conceptual understanding of software development-related issues.
- Quizzes may be closed book.
- You cannot makeup a quiz, but I will drop your lowest quiz score.
- Occasionally, I will select a program and grade it in detail in lieu of a quiz. **When I do this, only completed, successful programs will receive full points.**

Exams

Exams are open book, open note. My focus is that you learn Java programming skills when you leave my class. If it will help your course grade, I will replace any lower regular exam scores with a higher final exam grade.

Attendance and withdrawal

- You must be on time in order to receive your attendance points.
- I may withdraw any student who does not attend the first class meeting.
- If you are considering withdrawing from the class, please talk with me first. My goal is to help students succeed.
- If you still decide to withdraw, it is your responsibility to officially withdraw from class. You are responsible for filling out withdrawal paperwork.
- If you fail to complete and file withdrawal paperwork, I may assign you a letter grade based on the points you earned in the class.

Missed Classes

I understand that students have busy schedules and sometimes missed classes cannot be avoided.

- With the exception of missed exams, there's no need to contact me concerning routine absences such as illness, scheduling conflicts or transportation troubles.
- I drop two missed attendance days, one quiz, and three missed assignments to cover routine absences.
- 5 points will be deducted from your attendance/participation grade for every class missed

beginning with the third missed attendance day.

- However, if you have a long term challenge that will affect your attendance in my class, such as chronic health problems or work schedule changes, please let me know as soon as possible. Then, we can brainstorm options and find one that will work for both of us.
- If you know you will be absent, you may still receive credit for your assignments. You can submit them via email (patricia.baker@cgcmail.maricopa.edu) or hand them to me **prior to the start of class on the due date**.
- In the case of exams, you may make them up if you approach me ahead of time and I agree to it. You must complete the make-up before the next class. If I don't agree to the make-up or you are unable to make up your exam in that time frame, I'll substitute your score on the comprehensive final exam for your missing exam grade.
- You will need to check the online schedule to see a list of what we covered in class and most handouts. It is always a good idea to check with other students to share notes.
- Remember that I hold office hours every day (Friday by appointment) to assist you.
- You may also wish to schedule a session with a tutor at the learning center to help you go over what you missed.

Tips for Success
Attend every class.
Seek help early and often.
Complete your reading before class.
Code the examples as you read them in the book. Hint: the homework usually is a variation on an example from the chapter, so you have a great head start!
Do not wait until the last minute to complete your assignments. Leave yourself time to get assistance if you need it.
Form a study group. Programmers in industry work in groups, you should too!

Administrative Messages

STATEMENT REGARDING OUTCOMES AND ASSESSMENT

The faculty and programs at CGCC are dedicated to effective teaching and successful learning with emphasis in the following areas: reading, speaking, listening, writing, mathematics, science, computer application skills, humanities, problem-solving, information literacy, critical thinking, and personal development.

Periodically, students will participate in formal and informal assessment activities that will help faculty improve programs and teaching strategies. These activities are designed to facilitate student growth in whatever combination of the above outcomes applies to a course.

STATEMENT REGARDING SPECIAL NEEDS

Any students with special needs should inform the instructor of any assistance that will be required. In order to accommodate your needs, you will need to give proper notice as to what accommodations will be necessary, and have documentation on file in the office of Disability Resources and Services. It is preferable that you identify yourself at the

beginning of the semester. If this is not possible, you must give at least 48 hours notice before an accommodation is necessary. Special arrangements can be made regarding seating, hearing devices, testing time, as well as many other concerns. If there are any other concerns you have, please address them as soon as possible or call the Office of Disability Resources and Services at (73)27050.

INFORMATION ON LEARNING CENTER SERVICES

The CGCC Learning Center's mission is to support students' academic learning by providing free tutoring and resources to reinforce and supplement classroom instruction and to assist CGCC students to achieve academic success. Free tutoring services are available for many CGCC courses. The Learning Center is located on the second floor of the Library, rooms L227, L228, and L229. The Center also provides instructional support resources in the form of videotapes, software, and print materials. For a schedule of tutoring hours, additional information or assistance contact the Learning Center at (480) 732-7231, or visit our website at: <www.cgc.maricopa.edu/lc>

STATEMENT CONCERNING PLAGIARISM

Plagiarism is defined as presenting the work of another as one's own. More than four consecutive words from a source other than the writer constitute plagiarism when the source is not clearly identified in appropriate documentation format.

From the CGCC Student Handbook: "Plagiarism includes, but is not limited to, the use of paraphrase or direct quotation, of the published or unpublished work of another person without full and clear acknowledgement. It also includes the unacknowledged use of materials prepared by another person or agency engaged in the selling of term papers or other academic materials."

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