

CSC 204 / F16
Programming I
Section 001

Dr. Andrew Pounds,

Office: Rm. 105 Willett Science Center, (478) 301-5627
Rm. 203 Computer Science Building
e-mail: pounds.aj@mercer.edu
Alt Phone (SMS): (478) 227-3444
Office Hours: MWF 9:00 - 9:50 a.m. (WSC 105) (or by appointment)

CSC 204 is the first course in a two-part sequence to expose students to the foundational principles of computer science by introducing them to programming in a modern object-oriented language. Topics to be covered include structured and object-oriented programming, syntax and semantics, data types and simple data structures, classes, control structures, and simple 2D graphics. Students will accomplish this initiation by programming in the *Java* programming language using an Interactive Development Environment under the Windows operating systems. For that reason, students taking CSC 204 will also be introduced to the fundamentals of commands, directory structure, tools, and editors useful for developing programs under this operating system. While no prior programming experience is required, students in CSC 204 are expected to read at the college level and also demonstrate math competency.

Upon completion of this course, a student will demonstrate competence in each of the following areas:

- Describe the steps in software analysis and design that are used to solve a problem,
- Produce a specification and an algorithm to solve a problem, and use a module structure chart to describe a program's structure, show parameters being passed, and create subprogram specifications,
- Code, trace, test, and debug a Java program,
- Construct and evaluate arithmetic and boolean expressions,
- Identify and use simple primitive data types, and the array and class reference types,
- Know what objects are, how they are created from classes, and know how methods are used to perform operations on objects,
- Write, call, and pass parameters through both value-returning and void methods,
- Construct control structures for selection and repetition,
- Perform simple searching and sorting techniques on an array,
- Use graphics methods to draw geometric shapes and display text,
- Describe some of the basic ethical issues confronting computing professionals.

As part of the *Mercer General Education Program* students in CSC 204 will also be able to think critically as exhibited by the ability to:

1. Coherently integrate information from a variety of sources;
2. Support valid arguments with empirical, textual, theoretical and/or direct evidence;
3. Identify strategies to formulate judgments, reach decisions, and/or solve problems.

Students will also exhibit the ability to reason mathematically as exhibited by the ability to:

1. Construct precise mathematical justifications to support a claim;
2. Use mathematical terminology, notation, and symbolic processes appropriately and correctly;
3. Design and follow a multi-step mathematical process to solve problems and judge the reasonableness of the results;

4. Analyze mathematical problems and communicate solutions effectively to appropriate audiences;
5. Articulate the connections to theory necessary for effective problem solving;
6. Apply appropriate mathematical tools to solve problems arising in other disciplines.

Class Meeting Times and Locations

Lecture: (001) MWF 12:00–12:50 p.m., CSB 204
 Lab: (001) T 12:15 p.m – 1:30 p.m., CSB 204

Course Materials

Big Java, 5th ed., Cay Horstmann, John Wiley & Sons, 2013.
 >2GB Flash Drive (recommended)

Course Structure

Material from thirteen chapters of the text will be covered during the semester. The lecture time will be used to expound on and augment the text and also discuss problem solving and programming strategies. Additional topics will also be introduced during the class period and students directed to appropriate sections of the text. Students are responsible for all material covered in class as well as the material from the textual sections noted by the instructor. Numerous unannounced in-class quizzes will be given during the semester as well as four 50 minute exams. The best five quiz grades and the best three exam grades will count toward the final grade in the class. Five programming assignments will be submitted for grading as well as fifteen laboratory assignments. A three hour final exam will be administered at the end of the term.

Grading

Tests (best 3 @ 100 pts)	300 pts
Quizzes (best 5 @ 20 pts)	100 pts
Programs (5 @ 50 pts)	250 pts
Laboratory (15 @ 10 pts)	150 pts
Final Exam	200 pts

Total Possible	1000 pts

Course Grade Scale

A	≥900 pts
B+	≥880 pts
B	≥800 pts
C+	≥780 pts
C	≥700 pts
D	≥600 pts
F	<600 pts

The above course grading scale is assured, but may be *slightly* lowered based on class exam performance.

General Information

Honor Code: All students in CSC 204 are expected to adhere to the Mercer University Honor Code. Any suspected violations will be reported to the Honor Council for further investigation.

Many students have difficulty in determining how to apply the Mercer honor code to computer courses. A few general guidelines should help you in deciding whether you are violating the honor code or not.

1. You are allowed to receive help on your programs from other students, provided the purpose of the help is to help you understand your own program better, not to write your program for you.
2. You are NOT allowed to use copies of programs written by other students, or copies of programs from published sources, even if you plan to modify them extensively.
3. You are NOT allowed to give copies of your programs, or parts of your programs, to other students in any form.
4. YOU MUST WRITE YOUR OWN CODE. DO NOT COPY PROGRAMS OR PARTS OF PROGRAMS FROM ANY SOURCE UNLESS I TELL YOU TO DO SO.

Any violation of the above policies will be treated as academic dishonesty and a violation of the Mercer Honor Code.

Computer Use Policy: To complete your work in this course you will be granted access to a subset of computer systems in the Computer Science building and will be using network resources provided by both the University and

the Computer Science Department. By using these systems you agree to adhere to the University usage policy (http://it.mercer.edu/faculty/policy/it_access_and_use_policy.html) and furthermore understand that interfering with the function of these systems or networks to explicitly and adversely affect their normal use for teaching and research purposes will be viewed as a criminal offense.

Attendance: Except for the first ten days of the semester, attendance will not be taken. However, students are still accountable for all material covered in class as well as any announcements made during the lecture period.

Missed Exams and Quizzes: Anyone missing an exam or quiz for *any* reason (personal illness, death in the immediate family, or other emergency) must notify Dr. Pounds in advance. The absence will be considered unexcused otherwise. Make-up exams and quizzes will be individually scheduled.

Partial Credit: Partial credit will not be awarded on any quiz, exam, or lab deliverable unless individuals clearly delineate how they arrived at their answers.

Re-grading Policy: If a student suspects that an error was made in the grading of a submitted work, they may return the paper for re-grading with the understanding that the entire work will be re-graded and not only the portion in question.

Programming Assignments: There will be five programming assignments. Many times these are where you learn the most about the language. Detailed directions, the required deliverables, grading criteria, and turn-in procedures for each programming assignment will be described to you in written format when the assignment is given.

Program output should be reproducible; that is, the instructor should be able to copy your submitted program, compile the program, run your program and obtain exactly the same output you handed in. Programs will be graded on the following criteria :

1. Correctness: Programs should produce correct results for any set of data. If your program does not compile, or crashes on the initial input, you will receive no correctness points. (40 %)
2. Efficiency & Modularity: Programs should exhibit good design principles and careful planning in algorithm development. (20 %)
3. Identifiers: All variables, classes, and methods should be meaningfully named and adhere to principles described in Appendix A of the text. (20 %)
4. Comments & Indentation: All meaningful code must be commented. Every method should include comments on the name, behavior, and parameters. See Appendix A of the text for guidelines. (20 %)

Program Revision: You may revise any graded program assignment that you do not earn full credit toward in correctness (see the correctness category above). Late programs, programs which do not compile, or programs which crash on the initial input data set cannot be revised. You may turn in revised work up to one week after the assignment is returned.

Posting of Grades: Grades will not be posted. Students who want to know about their cumulative course totals should contact Dr. Pounds.

Starfish: This course will use Mercer's web-based success platform, *Starfish*. Throughout the term, you may receive *Starfish* emails containing feedback. These communications are sent to support your success at Mercer. You can access *Starfish* through your MyMercer portal.

E-mail Listserve: I maintain an e-mail listserv which I use copiously to send information to the class and which you can use to communicate with each other. To sign up for the listserv and to learn how to send information to it, please go to: <http://theochem.mercer.edu/mailman/listinfo/csc204>.

American Disability Act: "Students requiring accommodations for a disability should inform the instructor at the close of the first class meeting or as soon as possible. The instructor will refer you to the ACCESS and Accommodation Office to document your disability, determine eligibility for accommodations under the ADA/Section 504 and to request a Faculty Accommodation Form. Disability accommodations or status will not be indicated on academic transcripts. In order to receive accommodations in a class, students with sensory, learning, psychological, physical or medical disabilities must provide their instructor with a Faculty Accommodation Form to sign. Students must return the signed form to the ACCESS Coordinator. A new form must be requested each semester. Students with a history of a disability, perceived as having a disability or with a current disability who do not wish to use academic accommodations are also strongly encouraged to register with the ACCESS

and Accommodation Office and request a Faculty Accommodation Form each semester. For further information, please contact Carole Burrowbridge, Director and ADA/504 Coordinator, at 301-2778 or visit the ACCESS and Accommodation Office website at <http://www.mercer.edu/disabilityservices>”

Electronic Submission of Materials: “Students bear sole responsibility for ensuring that papers or assignments submitted electronically to a professor are received in a timely manner and in the electronic format(s) specified by the professor. Students are therefore obliged to have their e-mail client issue a receipt verifying that the document has been received. Students are also strongly advised to retain a copy of the dated submission on a separate disk. Faculty members are encouraged, but not required, to acknowledge receipt of the assignment.”

Assignment Turn In: Assignments for this class will be turned in via *Google Drive*. You therefore must have a *Gmail* account. Once you have submitted an assignment for grading you may no longer modify it AFTER the due date. The proper structure of your *Google Drive* folders for this class will be the subject of your first lab.

Cell Phones and Pagers: “Out of courtesy for all those participating in the learning experience, all cell phones and pagers must be turned off, or placed on vibrate, before entering any classroom, lab, or formal academic or performance event.”

General Education Assessment: The College of Liberal Arts is keenly interested in assuring the quality and integrity of its General Education Program. For this reason ungraded assignments from randomly students in (course number) will be provided by the instructor to the CLA General Education for assessment. The summary information from this process will be used to improve student learning and may appear in Mercer University reports and external publications. Individual student names will never appear in those documents and this process will in no way affect a students grade in the course. It is student learning outcomes for a group of courses that is being evaluated and not the course or individual student.

Tips for Succeeding in CSC 204

There is unquestionably a lot of material to be covered in CSC 204. For that reason it is imperative to keep up with the class. The last thing you want to worry about is covering two chapters of new material the night before the test. You are expected to keep up with the class reading and assignments. The unannounced quizzes are an added incentive for you to do this.

I cannot emphasize the importance of just “experimenting” with the computer system. It is there for you to help you learn the Java language and to also help you learn how to develop code, communicate, and converse in a corporate computing environment. To assist you further, I will provide pertinent information to you from my web server (<http://theochem.mercer.edu/csc204>).