CSI 163
Computer Science 1

Instructor: Dr. Ruimin Hu
E-Mail: Course Mail in Canvas
Phone: 410-777-7135
Office: CALT 342

Office Hours:
M 11:30am-12:30pm (CALT 204)
M 2:00-3:30pm (Office)
W 1:00-3:00pm (Office)
T/Th 8:00-10:00pm (Online)
Using Chat in Canvas
or Skype (Dr.Hu_aacc)
or by appointment

Course Description

Use fundamental design principles and problem-solving techniques introduced in CSI 117 to develop computer algorithms. Implement algorithms as programs coded in Java, an object-oriented programming language. Learn the data types, control structures, classes, arrays, and I/O in the Java programming language. Learn graphical user interfaces, inheritance, polymorphism, recursion, and exceptions. Emphasize style, documentation, solution robustness, and conformance with specifications throughout course work.

4 credit hours
Prerequisite: CSI 117 or permission of Computer Technologies Director or Computer Science Coordinator.

Course Objectives

Upon the completion of this course, students will be able to

1. Discuss the technologies that support Java programming.
2. Demonstrate understanding of control structures.
3. Make use of modularity for developing solutions to business and scientific problems.
4. Use static array and dynamic array to maintain data with a Java program
5. Create Java applications using Object-Oriented Programming (OOP) techniques
6. Explain the concepts of inheritance and software reuse
7. Design and implement a program solution using inheritance structures
8. Explain the concepts of polymorphism and software reuse
9. Design and implement a program solution using abstract classes and interfaces
10. Use exception handling effectively to anticipate and handle error conditions
11. Explain the difference between text and binary files
12. Perform file I/O using Java
13. Understand the Java packages that support GUI applications
14. Use Java classes to produce a GUI application

Textbooks

Tony Gaddis & Godfery Muganda (2010). ***Starting out with Java: from Control Structures Through Data Structures*** (2th Edition). Pearson. (ISBN: 978-0-321-54586-2)

Hardware Required

- Flash drive

Software Required

- Online tool for creating UML (https://www.draw.io/)
- JDK (http://www.oracle.com/technetwork/java/javase/downloads/jdk7-downloads-1880260.html)
- Java IDE: jGRASP (http://www.jgrasp.org) (You may use other IDEs, such as Eclipse, Netbeans, JCreator, and so on)

Evaluation Criteria and Grade Weighs

- **Assignments (lab exercises)**
  Assignments are due at the deadline specified by the instructor, and submit in Canvas. Late assignments are absolutely not accepted, except for bone-fide reasons out of your control (e.g., a medical or family situation, or a jury duty) that you can't complete the work on time. In this case, special arrangements can be made, but it is your responsibility to inform the instructor ahead of time and to provide necessary documentation (e.g., a doctor's note).

- **Quizzes**
  Before a graded quiz is taken, an un-graded pre-quiz will be provided for practice purposes. Each quiz is designed to cover the contents of one or two units that have just been covered in class. You will take quizzes in Canvas. No make-up quizzes will be given; however, the lowest quiz grade is automatically dropped.

- **Exams**
  Exams may cover any previous material, meaning that they are comprehensive, not accumulative. Absolutely no makeup exams will be given unless arrangements are made with the instructor **prior to** the originally scheduled date.

- **Participation**
  Class participation requires students to get involved in class discussion. Participation activities include: 1) Complete practice problem; 2) Answer and discuss questions posted by the instructor; 3) List at least one interesting point and one muddy point for each unit; 4) Post your own questions and/or respond to other classmates' questions. Class participation will be checked and documented by the instructor and graded at the end of the semester.

The course grades breakdown:

Requirements	Number	Total Points	Grade Calculation
Programming exercises	8	35%	A = 90% & above B = 80% - 89% C = 70% - 79% D = 60% - 69% F = 59% & below
Quizzes (drop the lowest)	8	20%	
Midterm exam	1	15%	
Final exam	1	20%	
Participation		10%	
Total		100%	

Policies on Grading

- Students will submit each assignment in a drop box in the format specified in the description. Any missed assignment, quiz or exam earns a grade of 0.
- The instructor will download submitted assignments, grade them based on the rubric, and make comments on students' assignments.
- The graded assignments will be sent back to students within three days after the due day.
- Each graded item will be posted in the grade book after grading. You have 1 week after the return of a graded item to contest/question a grade. After that the grade is locked.
- As the class progresses, you can view your average grade with percentage you have earned in the grade book. If you cannot complete the course, make sure that you formally withdraw from the class

Schedule (The schedule is subject to change.)

Week	Date	Topic	Reading	Task Due
1	3/23-31	Course Overview Unit 1 Java Fundamentals and Methods	• Syllabus • Ch. 1, 2, & 5 • Appendix A, D, & I	Quiz 1 Pro. Ex. 1
2	4/1-7	Unit 2 Classes and Objects	• Ch. 6 • Ch. 9 (9.1-9.5, & 9.8)	Quiz 2 Pro. Ex. 2
3	4/8-14	Unit 3 Control Structures	• Ch. 3 • Ch. 4 (4.1-4.9, & 4.12) • Appendix B	Quiz 3 Pro. Ex. 3
4	4/15-21	Unit 4 Array, `ArrayList` Class, and Wrapper Class	• Ch. 8 (8.1 -8.9, & 8.12- 8.13) • Ch. 10 (10.1-10.2 & 10.6)	Quiz 4 Pro. Ex. 4
5	4/22-28	**Midterm** Unit 5 Inheritance	• Ch. 11	Quiz 5 Pro. Ex. 5

6	4/29-5/5	Unit 6 Exception Handling and File I/O	• Ch. 4 (4.10) • Ch. 12	Quiz 6 Pro. Ex. 6
7	5/6-12	Unit 7 GUI Applications	• Ch. 7 (P363-376, P384-388, P394-439)	Quiz 7 Pro. Ex. 7
8	5/13-21	Unit 8 Applets and more about GUI **Final Exam**	• Ch. 7 • Ch. 13	Quiz 8 Pro. Ex. 8

- **Important dates:**
  - Late registration (drop/add): Mar. 23-24
  - Last day to drop with a full refund: Mar. 27
  - Last day to change to audit: Apr. 24
  - Last day to withdraw: May 8

Statement of Study Time Expectations

College classes require a significant time investment in order for students to be successful. The typical college class (face-to-face class) requires a minimum time investment of **2 hours** for each credit hour, in addition to the time spent in class. Since CSI 163 is a 4-credit course, the expectation is that you will spend a minimum of **8 hours** each week outside of class working on class assignments such as reading, studying, practicing problems, and completing assignments. The instructor or the class may require *additional time*.

Since CSI 163-878 is an online, 8-week course, students are supposed to spend over 20 hours per week on study!

More important than how ***MUCH*** someone should study is ***HOW*** someone should study. Studying is a skill, and if students have not developed that skill, they may still struggle regardless of how much time they study. More information about study skills, including time management techniques, can be found at:

http://ola2.aacc.edu/vc/timemanagement/TimeManagementWebShop/

Help Information

Feel free to ask for help with assignments during the lab time or right before/after class session. If you need extra assistance, you have the following options:

- Go to the open lab in CALT 204.
- Ask the instructor for help during the office hours or make an appointment with the instructor.
- Join the tutoring program: http://services.smarthinking.com.

Contacting the Instructor

The best way to contact the instructor is via the course e-mail on Canvas. DO NOT send email to rhu@aacc.edu unless Canvas is down or inaccessible. I respond to emails within 24 hours, usually less. An exception may occur over the weekend or at the times when the college is closed.

Computer and Electronic Communication Access and Usage

Access to computer and electronic communication resources, such as the Internet, electronic mail, computer labs, and networks, is a privilege provided at the discretion of the college to:

- Support teaching and learning
- Serve the information and communication needs of the college
- Deliver instructional content
- Disseminate information about the college
- Conduct official college business

Acceptable uses of computer and electronic communication resources are those that support the purposes above. Computer, Internet and network usage at the college is governed by college policy as well as federal, state and local laws. Individuals who inappropriately or illegally use computing and network services may suffer all applicable college and legal penalties for such misuse. The full text of this policy is found in the College Catalog.

Use of Canvas

Canvas is the AACC course management system for this course. When you log onto MyAACC, you will be directed to Canvas. You will use Canvas to:

- Obtain the course syllabus, assignments, lecture handouts, and other instructional materials.
- Take quizzes and some parts of exams.
- Check your grades as the class progresses.
- Communicate by course email with your instructor and classmates.
- Check important announcements.

Academic Integrity

All graded work must be completed independently. Cheating, plagiarism, collaboration, copying, etc. are not tolerated in this course. All students are expected to adhere to the college's policies regarding integrity and dishonesty. Please refer to the current college catalog (page 394) or the current student handbook for the complete college policy on academic integrity. Academic dishonesty will be handled according to this policy.

Notice of Nondiscrimination

AACC is an equal opportunity, affirmative action, Title IX, ADA Title 504 compliant institution. Call Disability Support Services, 410-777-2306 or Maryland Relay 711, 72 hours in advance to request most accommodations. Requests for sign language interpreters, alternative format books or assistive technology require 30 days' notice. For information on AACC's compliance and complaints concerning discrimination or harassment, contact Kelly Koermer, J.D., federal compliance officer, at 410-777-2607 or Maryland Relay 711.

More AACC Student Policies

http://www.aacc.edu/studentpolicies/default.cfm