

Sections 3/4: MWF 09:30 - 10:20 AM

class webpage: http://www.csc.lsu.edu/~duncan/courses/csc1350-f19
--

Instructor: William E. Duncan, PhD
Office: 3270C Patrick F. Taylor Hall
Email Address: [duncan@\[bit.cse or csc\].lsu.edu](mailto:duncan@[bit.cse or csc].lsu.edu)
Office Hours: <http://www.csc.lsu.edu/~duncan/sched.htm>

Course Description:

Fundamentals of programming, program design, and algorithms using a high-level block-structured language. – 4 sem. hrs.

Required Textbook:

Big Java Late Objects Includes Java 8 Coverage 2/e, Cay Horstmann
(Paperback - ISBN: 978-1-119-22563-8 or Enhanced E-text - ISBN: 978-1-119-32107-1)

Supplementary Reading:

Computer Science: An Overview 11/e, J. Glen Brookshear
(e-book - ISBN: 978-0-13-256903-5)

Prerequisites:

1. credit or registration in MATH 1022 or MATH 1023 or MATH 1550 or MATH 1551 or MATH 1552.
2. Credit will not be given for both this course and CSC 1250 or CSC 1253.

Goal:

To build problem-solving skills from an algorithmic viewpoint using the Java programming language. By the end of this course the student will:

- understand the origins and early development of computer science as an academic discipline as well as the basic issues underpinning the discipline,
- employ programming principles in problem-solving,
- Design and analyze basic searching and sorting algorithms, and
- explore the fundamentals of the object-oriented programming (OOP) paradigm.

Evaluation:

Grading will be based on laboratory exercises, a programming project and three exams.

Laboratory Exercises	25%
Exam 1	25%
Exam 2	25%
Final Exam	25%

Final grade will be determined by overall average as follows:

Table 1: Percentage Score to Letter Grade Assignment

SCORE	GRADE	SCORE	GRADE	SCORE	GRADE
90-92.99	A-	93-96.99	A	97-100	A+
80-82.99	B-	83-86.99	B	87-89.99	B+
70-72.99	C-	73-76.99	C	77-79.99	C+
60-62.99	D-	63-66.99	D	67-69.99	D+
0-59.99	F				

Class Policies:

- Attendance: **There will be no make-up for missed work.** A grade of 0 is awarded for missed work in the absence of a valid excuse. It is your responsibility to obtain notes and assignments from a willing classmate if you **MUST** miss class.
- Collaborative Work: *High standards of academic integrity are crucial for the University to fulfill its educational mission. To uphold these standards, procedures have been established to address academic misconduct.*[from LSU Code of Student Conduct]. It is assumed that all students enrolled in this course have read the Code of Student Conduct - specifically section 10.1 (Academic Misconduct). The Code of conduct is available at <https://www.lsu.edu/saa/students/codeofconduct.php>.
- Due Dates: All work intended for grading at full credit must be submitted on time. Programming exercises will be submitted via drop boxes on the course Moodle. The cut-off period for late submission of laboratory exercises is an hour past the due time with a late penalty of 10%. Any work not submitted before the cut-off period is not graded.
- Grading Corrections: All grades are uploaded to the course Moodle. Concerns about grades must be address within a week after the graded work is returned. Thereafter, all grade book entries are final.
- Missed Exam: Students are encouraged to take every exam. In the unusual circumstance you miss an exam due to medical reasons or other unforeseen emergencies, obtain an official excuse from the Dean's office as soon as possible. If you obtain a valid excuse from the Dean's office, the instructor reserves the right to schedule a cumulative final exam that will count for the exam missed and the final exam.

- Special Accommodation: Students who have a disability that require accomodation(s) should make an appointment with the Office of Disability Services (Phone: (225)578-5919 or TDD: (225)578-2600) to discuss their specific needs and present a letter from the ODS informing the instructor of their needs. All such matters, by University regulations, are strictly confidential.
- Exam Dates:
 - ⊙ Exam 1 - Tuesday, October 1
 - ⊙ Exam 2 - Tuesday, October 29
 - ⊙ Final Exam - Wednesday, December 11, 3:00 - 05:00 P.M.
- Important Dates:
 - ⊙ Wednesday, September 4 - Final day to drop without a W (4:30 p.m. deadline)
 - ⊙ Friday, November 8 - Final day for dropping courses (4:30 p.m. deadline)
- Topics we will study: (not necessarily in this order)
 1. Introduction
 2. The Binary System
 3. Fundamental Data Types
 4. Decisions
 5. Loops
 6. Methods
 7. Arrays (& optional topic - Array Lists)
 8. Objects and Classes
 9. Sorting and Searching

Problem Sets

Topic	Reading	Exercises
Introduction	§1.1-1.7	SC:4-5,7-20; R:1.7; P:1.1-1.3
The Binary System ¹	§1.4-1.6*	Q&E ² : 1.4:1-7; 1.5:1-5; 1.6:1-3
Fundamental Data Types	§2.1-2.3,2.5	SC 1-3,10-20,26-30;R2.4-2.8
Decisions	§3.1-3.4,3.7	SC:2-19,31-35;R3.1-3.4,3.27 R:3.30-3.31
Loops	§4.1-4.5,4.7-4.8	SC:5-9,11-14,16-20,25,31-35,40-41
Methods	§5.2	SC:5-9
Array & Array Lists	§6.1,6.3,6.8	SC:1-6,12-14,35-36,39-43
Objects & Classes	§8.1-8.7, 8.9-8.11	SC:1,5-6,12-14,21-27,35-38,40-41
Bubble Sort ³	§5.4 ⁴	Q&E ⁵ : 5.4:7,CRP ⁶ :12.47
Searching	§14.6,14.8	SC ⁷ :1-4

¹from Computer Science: An Overview 11/e, J. Glen Brookshear

²from Computer Science: An Overview 11/e, J. Glen Brookshear

³from Computer Science: An Overview 11/e, J. Glen Brookshear

⁴from Computer Science: An Overview 11/e, J. Glen Brookshear

⁵Bubble Sort Description - Computer Science: An Overview 11/e, J. Glen Brookshear

⁶Bubble Sort Algorithm - Computer Science: An Overview 11/e, J. Glen Brookshear

⁷answer assuming bubble sort rather than selection sort