

CS200_5: Programming I
College of Arts & Sciences Syllabus

COURSE INFORMATION

Credit Hours: 3.0

Meeting Time & Location: Wednesdays 7:05-9:45 pm, Room: LWH 2108

Workshop Time & Location: Wednesdays 6:00-6:50 pm, Room: LWH 3031

Course Description: This course serves as an introduction to principles of computer programming. It covers fundamental concepts including input/output, data types, arithmetic, relational, and logical operators, branching, looping, methods, and arrays. Programming projects involving these concepts will be assigned for interactive applications, numeric computations, and analysis of data. A common comprehensive final exam will be given for all sections of CS-200, Programming I—the date of the final exam will be published within the section record each term.

Course Prerequisites: MATH-173 minimum grade of C.

FACULTY INFORMATION

Instructor: Yehuda Gutstein

Peer Leaders: Sana Kanwal and Daniel Ayvar

Office Location: LWH 3050

Office Hours: Wednesday and Thursday 6:00pm – 7:00pm

Phone Extension: N/A

E-mail: ygutstei@neiu.edu or y-gutstein@neiu.edu

COURSE MATERIALS

List of Required Texts / Materials:

1. Introduction to Java Programming 11E, Y. Daniel Lang, Pearson Higher Ed, 2013. ISBN-13: 978-0-13-469451-1
2. Flash drive to back up your work.

MAJOR COURSE TOPICS

- Introduction to Computer Programming and its Application toward Problem Solving
- Elementary Programming
- Selections
- Mathematical Functions and Characters
- Loops
- Methods
- Single-Dimensional Arrays
- Multidimensional Arrays

COURSE OBJECTIVES / STUDENT LEARNING OUTCOMES

Upon successful completion of this course, students will be able to apply fundamental programming concepts including input/output, data types, arithmetic, relational and logical operator, branching, looping, and arrays in order to:

- Formulate a sequence of steps in order to solve a given programming problem.
- Encode such steps as instructions for a computer to perform them.
- Decode a given set of computer instructions to determine exactly what they do.

STUDENT TASKS / ASSIGNMENTS / REQUIREMENTS

Homeworks (HW):

HW's will be assigned weekly after the completion of the lecture. HW's must be submitted via D2L before the start of the following class. Grades for HW's are pass/fail. Full credit will be given for a solution that displays a valid attempt, regardless of being correct. The goal of the homework assignments is to gain familiarity with the topics discussed in class that week. **I will not be marking up / giving feedback homework assignments.** It is up to the student to ensure that the solutions work. If unsure, students may compare their work to the solutions posted on D2L. Homework solutions will be posted on D2L. **I WILL NOT accept any work submitted via email.** Failure to submit the HW on time and in the proper format and proper Assignment folder will result in no credit for that HW. **Absolutely no exceptions will be made.** Solutions will be posted within the week following the submission deadline.

Workshops (WS):

Workshops will meet once per week and are led by Peer Leaders. Workshop attendance is mandatory for all students enrolled in Programming 1. Each week, there will be a set of problems assigned for students to work on, either individually or in groups. Work may be done on paper or on the computer using jGrasp. Regardless of how the work is completed, students must submit the work to the appropriate Assignment folder on D2L (if completed on paper, a picture of the completed work is acceptable). In order to receive credit for the workshop, reasonable effort must be made on the assignment. Students need not complete all workshop questions to receive credit. Failure to turn in the assignment will result in no credit being given for that week. Additionally, if there was a quiz the previous class, peer leaders may review one of the problems with the students.

Quizzes:

There will be a quiz on average every week at some point during class. Quizzes will be CLOSED book, and will cover the material from the previous week(s). The quiz format will match the exam format so it would be good to think of them as mini practice exams. There are NO makeup quizzes whatsoever, regardless of the circumstances.

Midterm Exam:

There will be a midterm exam that will be CLOSED BOOK. The midterm format will closely match the final exam format so it would be good to think of this as a mini practice exam. There are NO makeup quizzes whatsoever, regardless of the circumstances. This is a pass/fail midterm exam. There are five problems and each will be graded individually as pass or fail. Passing a problem

CS200_5: Programming I
College of Arts & Sciences Syllabus

means a correct solution was provided. In order to pass the midterm exam you must pass at least three out of the five problems.

Final Exam:

Final Exam Policy: This course has a departmental common final exam. The CS 200 common final is scheduled for Saturday, December 7th at 8:30 a.m. - 10:30 a.m in LWH1001/TBD. If you cannot attend Saturday because of a religious reason (or other serious reason), you must notify your professor by email within the first two weeks of the semester in order to be accommodated. A sample final exam and practice problems will be available from the first day of classes on D2L.

This is a pass/fail final exam. The final will count towards 20% of your overall in-class grade. There are five problems and each will be graded individually as pass or fail. Passing a problem means a correct solution was provided. In order to pass the final you must pass at least three out of the five problems. In order to get a C or better in this class, you must meet two criteria: First, you must have a course average of at least 70%. Second, you must pass the final exam.

There will be no bathroom breaks during the final exam. Students need to use the restroom prior to the final exam as they will not be permitted to leave their room during the exam.

Cheating is a serious academic offense and violates the NEIU Student Code of Conduct. All students will be required to submit their electronic devices (phone, etc) to the instructor(s) proctoring the final exam (or any exams) prior at the beginning of the exam. **Failure to do so and/or any involvement in or suspicion of cheating will result in a failing grade for the final exam (and the course). Additionally, students involved in cheating will be reported for academic misconduct to the Dean of Students (two reports can result in expulsion from the university).**

Exam Makeup Policy

If you cannot attend an exam because of religious reasons or because of a previously scheduled conflict of a serious nature, you must send me an email by **September 18th** telling me the date and the reason you cannot attend in order to be eligible for a makeup exam. **Otherwise, there will be NO makeup exam. There are no makeups for missed quizzes.**

If you miss an exam due to a medical emergency, you must provide adequate documentation from your doctor in order to be eligible for a makeup exam.

Grading Policies and Formulae:

Quiz, Midterm and Lab Grading (per question)

Percent Range	Letter Grade	Description
90 – 100%	A	Up to two errors in performance
80 -89%	B	More than two errors in performance
70 -79%	C	One minor error in competence
60 – 69%	D	One major or two minor errors in competence
0 – 59%	F	Three or more errors in competence

Errors in Performance: Errors where it is apparent that the student knew what to do and how to do it, but made a mistake in the process of putting it on paper. For example: minor typographical errors, minor one-off syntax errors, etc.

CS200_5: Programming I
College of Arts & Sciences Syllabus

Errors in Competence: Errors that indicate either a lack of understanding the course material, or an inability to apply that understanding to the given problem.

The relative seriousness of errors will be determined by the instructor.

Course Grading

Item	Weight	Course Average	Letter Grade
Workshops	5%	90 – 100%	A
Homework	5%	80 – 89%	B
Quizzes	35%	70 – 79%	C
Midterm	35%	60 – 69%	D
Final Exam	20%	0 – 59%	F

Course Outline:

The following is a list of course topics. Topics will be presented approximately as listed. The chapters within the text that cover these topics are your responsibility to read:

Chapter 1: Introduction to Computers, Programs and Java

Sections 1.1 – 1.10: Programming languages, operating systems, Java, Java language specifications, Creating a simple Java program, Programming style and documentation, Programming errors

Chapter 2: Elementary Programming

Sections 2.1 – 2.18: Console input, Identifiers, Variables, Assignments, Constants, Data types, Operations, Numeric literals, Operators, Type conversions

Chapter 3: Selections

Sections 3.1 – 3.12, 3.14 – 3.15: Booleans, if-Statements, Random numbers, Logical operators, Conditional expressions, Operator precedence

Chapter 4: Mathematical Functions, Characters and Strings

Sections 4.1 – 4.6: Mathematical functions, Character data type, String type

Chapter 5: Loops

Sections 5.1 – 5.11 While loops, do-while loops, for-loops, nested loops

Chapter 6: Methods

Sections 6.1 – 6.10: Method definitions, Calling/invoking methods, Passing arguments, Overloading methods, Variable scope

Chapter 7: Single-Dimensional Arrays

Sections 7.1 – 7.11: Array basics, Copying arrays, Arrays and methods, Searching/sorting arrays

Chapter 8: Multi-Dimensional Arrays

Sections 8.1 – 8.8: 2D array basics, 2D arrays and methods, multi-dimensional arrays

CS200_5: Programming I
College of Arts & Sciences Syllabus

Tentative Schedule:

Week	Topic	Reading	Quizzes	Assigned	Due
1 (8/28)	1. Introduction and Computer Basics 2. jGrasp, Simple Java Programs and Programming Errors	Sections 1.1 – 1.10		WS01	
2 (9/4)	1. Console Input, Identifiers, Variables, Assignments, Named Constants, Numeric Types	Sections 2.1 – 2.10		WS02	WS01
3 (9/11)	1. Common Errors, Evaluating Expressions, Assignment Operators, Increment & Decrement Operators, Numeric Type Conversions 2. Generating Random Numbers 3. Mathematical Functions	Sections 2.11 – 2.18, 3.7	Quiz 1	WS03 HW03	WS02
4 (9/18)	1. The Character Type 2. The String Type	Sections 4.1 – 4.5	Quiz 2	WS04 HW04	WS03 HW03
5 (9/25)	1. Boolean Data Type, if-statements 2. Nested if-statements and Multi-way if-else statements, Logical Operators, Operator Precedence	Sections 3.1 – 3.6, 3.8 – 3.12, 3.15	Quiz 3	WS05 HW05	WS04 HW04
6 (10/2)	1. Methods	Sections 6.1 – 6.10	Quiz 4	WS06 HW06	WS05 HW05
7 (10/9)	NO CLASS			WS06B	WS06 HW06
8 (10/16)	1. While Loop 2. Do-While Loop 3. For-Loop	Sections 5.1 – 5.8	Quiz 5	WS07 HW07	WS06B
9 (10/23)	MIDTERM EXAM			WS07B	WS07 HW07
10 (10/30)	1. Single Dimensional Arrays	Sections 7.1 – 7.4	Quiz 6	WS08 HW08	WS07B
11 (11/6)	1. Single Dimensional Arrays and Methods	Sections 7.6 – 7.8		WS09 HW09	WS08 HW08
12 (11/13)	1. Nested Loops 2. Multi Dimensional Arrays	Sections 5.9, 5.11, 8.1 – 8.8	Quiz 7	WS10 HW10	WS09 HW09
13 (11/20)	1. Sorting Arrays 2. Searching Arrays	Sections 7.10 – 7.11	Quiz 8	WS11	WS10 HW10
14 (11/27)	NO CLASS – THANKSGIVING EVE			WS11B	WS11
15 (12/4)	REVIEW FOR FINAL			WS12	WS11B
(12/7)	FINAL EXAM @ 8:30AM				

COURSE POLICIES AND STATEMENTS

Absence Policy:

Attendance is mandatory. **Six (6) or more absences (including workshops) will result in an automatic F in the course.**

Academic Integrity Policy:

By enrolling in this course, you are bound by the NEIU Student Code of Conduct: <http://www.neiu.edu/university-life/student-rights-and-responsibilities/student-code-conduct>. You will be informed by your instructor of any additional policy specific to your course regarding plagiarism, class disruptions, etc.

ADA Statement:

Northeastern Illinois University (NEIU) complies with the Americans with Disabilities Act (ADA) in making reasonable accommodations for qualified students with disabilities. To request accommodations, students with special needs should make arrangements with the Student Disability Services (SDS) office, located on the main campus in room D104. Contact SDS via (773) 442-4595 or <http://www.neiu.edu/university-life/student-disability-services>.

Campus Safety:

Web links to Campus Safety: Emergency Procedures and Safety Information can be found on NEIUport on the MyNEIU tab or as follows:
http://homepages.neiu.edu/~neutemp/Emergency_Procedures/MainCampus/.

General Policies:

No grade of "I" will be given.

No makeup exams/quizzes will be given. Missing an exam/quiz will result in an F for that exam.

I reserve the right to move anyone's seat during any lecture, quiz, or exam without explanation.

You must bring your NEIU I.D. to each quiz and midterm exam. I reserve the right to check your I.D. at each quiz and final exam.

The use of cell phones, iPads, smart watches or computers during class time for non-class or non-emergency purposes is not allowed. Phones are to be muted and laptops/iPads are to remain closed and smart watches are to be removed. Laptops may be used for in class work.

There will be NO extra credit projects given to improve grades.

Plagiarism will not be tolerated. All completed assignments are to be your own work. NEIU's policy on academic integrity states that a student may be expelled for plagiarism.

Policies may be modified or added as I deem appropriate/necessary.

Important Dates:

Friday, November 1 – Last day to drop the course and receive a 'W'.

Saturday, December 7 – Final Exam