

CS 602 – Java Programming Syllabus

Credits: 3

Course Mode:

This course will be taught in class, a face to face setup. For more information on various types of class setup, please see [NJIT's Modes of Instructional Delivery](#).

Instructor Information:

Raihan Siddique, e-mail: rs792@njit.edu. Best way to communicate with me is via email. E-mails will be responded to in 24 hours. All assignments will be graded weekly.

Course Description:

The emphasis will be on the Java language and platform. No prior knowledge of Java is required but students are expected to have a good understanding of object-oriented programming concepts. After laying a foundation of basic constructs, syntax, and core Java, the course will focus on OOP principles such as encapsulation, inheritance, and polymorphism. And then move on to advanced topics like multithreading, searching, sorting, lambda expressions, generics, and collections. Finally, the course will teach how to develop GUI application with JavaFX and three tier client-server application with JSP & Servlet and JDBC.

Prerequisites:

Web-based programming with an emphasis on the Java language and platform. No prior knowledge of Java is required but students are expected to have a good understanding of object-oriented programming concepts such as encapsulation, inheritance, and polymorphism, experience with C++. Basic constructs and syntax and then the core advanced features.

Course Learning Outcomes:

After completion of the course, students will be able to:

- Implement Object Oriented Principles in application development
- Write multithreaded programs with synchronization
- Create front end application with latest Java technology
- Develop client-server application with database component

Required Course Materials:

Required textbook:

- Java Software Solutions (9th edition) by John Lewis and William Loftus
Pearson Education
ISBN-13: 978-0134462028
ISBN-10: 9780134462028

Optional textbook:

- Object Oriented Software Development Using Java (2nd Edition) by Xiaoping Jia
Addison Wesley; 2nd edition (November 1, 2002)
ISBN-10: 0201737337
ISBN-13: 978-0201737332

Vocareum

In this course, you will be required to use Vocareum for some assignments. Vocareum is a cloud platform that integrates with Canvas to deliver online coding projects and assignments.

When you open an assignment in Canvas that's integrated with Vocareum, you'll be automatically authenticated, and you should see the relevant workspace where you can code your assignment and ultimately submit your work. Your workspace will include a code editor, a file system, and a terminal. The terminal window functions just like your computer's default terminal. You will use this window to run code and debug it as necessary.

Some helpful resources may include Vocareum's [Getting Started](#) documentation and [Privacy Policy](#). Questions or problems can be submitted via web form by going to: servicedesk.njit.edu and clicking on the "Report your issue online" link. You may also call the IST Service Desk with any questions at 973-596-2900.

Course Topics:

- Introduction to Java, JDK, JVM, basic constructs, and data types.
- Class, Constructor, Object, and Method.
- String, Math, Scanner, and Random class; Autoboxing.
- Project, package, and multi class programs
- OOP – encapsulation, inheritance, and polymorphism.
- Conditions and loops
- Arrays
- Recursion
- File handling and Exception
- Multithreading and synchronization
- Sorting and searching
- Lambda expression
- Generics and collections
- JavaFX
- JSP and Servlet
- JDBC

Key dates:

Make a note of the following key dates for the semester.

Date	Event
1/18/24	Semester begins, first class meets
2/29/24	Mid Term
3/14/24	No class – Spring Break
5/2/24	No class – Reading Day
5/9/24	Final (Tentative)

In addition, all weekly assignments will be assigned on a Thursday and will be due on next **Thursday by 11:59 pm**.

Grading Policy:

Grading will be done on a weighted average basis. The distribution of weights are as follows:

Segment	Weight
Assignments	25%
Mid term	25%
Final	25%
Classwork	25%

The Classwork consists of:

1. Participation in the class and
2. Four quizzes.

The quizzes will be held in the classroom and there will be no preannouncement of the dates.

The final letter grade will be determined based on this table below:

Rounded %	< 70	70 - 74	75 - 79	80 - 84	85 - 89	90 - 100
Grade Points	0	2.00	2.5	3.00	3.5	4
Letter Grade	F	C	C+	B	B+	A

Tutoring Assistance:

NJIT provides tutoring help if you need it. For CS602, the scheduled time slot is displayed on the website for tutoring center. Please check the website: <https://computing.njit.edu/graduate-tutoring> for details.

Assessment Categories and Descriptions:

Students will be assessed on the basis of homework assignments, exams, and classwork. Homework assignments will be assigned on Canvas and students will submit through Canvas by the due date. Each assignment will be graded with my feedback on the Canvas. The exams will be of two and a half hours duration and will include a mix of True/False questions, multiple choice questions, writing codes, code interpretation and short answer questions. The classwork consists of questions and answers in the class, discussions in the class, and surprise quiz.

Exam Information and Policies:

The exams will be held in class and everybody is required to be present in person. Midterm will be held on 10/26/2023 from 6:00pm to 8:30pm and the Final will be held on 12/21/23 from 6:00pm to 8:30pm. Registrar's office may assign a different date for the Final. In that case the Final will be held on the assigned date. You will also be informed via email prior to exams. There is no makeup test for any missed test, unless of course a student faces an emergency. In such a situation, a mutually agreed test date will be set up.

For more information, please visit the [Online Course Exams and Proctoring](#) page.

Policy for Late Work:

Homework assignments are due by due dates 11:59pm. Your submission is time stamped by Canvas. Late submission will lose 10 points for each day. After two days no submission will be allowed. Unless it's an emergency, there is no makeup for assignments. There's no makeup for Midterm, Final, and the Quizzes. If one has to be arranged, the date and time will be communicated via email.

Extra Credit:

There is no provision for extra credit in this course. Please make a note of it and make sure to do all homework on time and take the exams on due date.

Academic Integrity:

Academic Integrity is the cornerstone of higher education and is central to the ideals of this course and the university. Anything less is strictly prohibited and devalues the degree that you are working on. As a member of the NJIT community, it is your responsibility to protect your educational investment by knowing and following the [academic code of integrity policy](#).

Please note that it is my professional obligation and responsibility to report any academic misconduct to the Dean of Students Office. Any student found in violation of the code by cheating, plagiarizing or using any online software inappropriately will result in disciplinary action. This may include a failing grade of F, and/or suspension or

dismissal from the University. If you have any questions about the code of Academic Integrity, please contact the Dean of Students Office at dos@njit.edu.

Expectations of Class Etiquette:

Students are expected to follow [NJIT's Code of Student Conduct](#). Students should be polite, active participants and respect their instructor, classmates, as well as ideas or opinions that differ from their own. While scholarly debates are encouraged, they should not become personal.

Weekly Expectations:

This course is organized by weekly modules. Each week, students must follow lecture materials, go over the lecture notes, practice sample programs, participate in class and complete assignments for the week by 11:59pm of the due date.

Request for Accommodation:

If you need accommodations due to a disability please contact Scott Janz, Associate Director of the [Office of Accessibility Resources and Services](#), Kupfran Hall 201 to discuss your specific needs. A Letter of Accommodation Eligibility from the office authorizing student accommodations is required.

Canvas Accessibility Statement

Canvas Orientation for Students

NJIT Services for Students, Including Technical Support