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 such as encapsulation, inheritance, and polymorphism. The course lays a foundation of basic constructs and syntax and then focuses on the core advanced features. Topics include: Classes, Objects, Constructors, Methods, Object Oriented concepts, Arrays, Exceptions, Database connectivity (JDBC), Multi-threading, Generics and Collections, JSP & Servlet, and JavaFX.

Prerequisites:
Advanced 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:
- Develop client-server application with database component
- Write multithreaded programs with synchronization
- Create interactive client program with latest Java technology
- Implement Object Oriented Principles in application development

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 and Assignments:

(All dates are in EST/EDT)

Date	Lecture# & Topic	Assignments	Due Date
9/5/24	**Lecture1:** Introduction to the course - Java, JDK, Classes, Objects, Constructor, and Methods.	Read chapter 3 of the textbook along with lecture notes. Introduction Forum: Complete "Who am I?"	9/12/24 11:59pm 9/12/24 11:59pm
9/12/24	**Lecture2:** Classes, Objects, and Methods. String, Math & Random Class; Autoboxing; Object Oriented Programming; Encapsulation	Read chapter 3 and 4 of the textbook along with lecture notes. Assignment: **Assignment1**	9/19/24 11:59pm 9/19/24 11:59pm
9/19/24	**Lecture3:** Object Oriented Programming; Inheritance & Polymorphism	Read chapter 9 and 10 of the textbook along with lecture notes. Assignment: **Assignment2**	9/26/24 11:59pm 9/26/24 11:59pm

9/26/24	**Lecture4:** Condition and Loops	Read chapter 5 and 6 of the textbook along with lecture notes. Assignment: **Assignment 3**	10/3/24 11:59pm 10/3/24 11:59pm
10/3/24	**Lecture5:** Array	Read chapter 8 of the textbook along with lecture notes. Assignment: **Assignment 4**	10/10/24 11:59pm 10/10/24 11:59pm
10/10/24	**Lecture6:** Exception, File handling, and Recursion.	Read chapter 11 and 12 along with lecture notes. Assignment: **Assignment 5**	10/24/24 11:59pm 10/24/24 11:59pm
10/17/24	**Midterm**		N/A
10/24/24	**Lecture7:** Multithreading & Synchronization	Read lecture notes. Assignment: **Assignment 6**	10/31/24 11:59pm 10/31/24 11:59pm
10/31/24	**Lecture8:** Sorting and Searching	Read chapter 10 of the textbook along with lecture notes. Assignment: **Assignment7**	11/7/24 11:59pm 11/7/24 11:59pm
11/7/24	**Lecture9:** JavaFX	Read chapter3 - from 'Introduction to JavaFX' to end & chapter4 - from 'Arcs' to end, along with lecture materials. Read chapter7 - from 'GUI Design' to end along with lecture materials.	11/14/24 11:59pm

		Assignment: **Assignment8**	11/14/24 11:59pm
11/14/24	**Lecture10:** JSP and Servlet	Read lecture note 'JSP and Servlet'. Assignment: **None**	11/21/24 11:59pm
11/21/24	**Lecture11:** JSP and Servlet 2	Read lecture note 'JSP and Servlet2'. Assignment: **Assignment9**	11/26/24 11:59pm 11/26/24 11:59pm
11/26/24	**Lecture12:** JDBC	Read lecture note 'JDBC'. Assignment: **Assignment10**	12/5/24 11:59pm 12/5/24 11:59pm
12/5/24	**Lecture13:** Lambda expressions, Generics and Collections.	Read chapter 13 along with lecture notes. Assignment: **Assignment11**	12/12/24 11:59pm 12/12/24 11:59pm
12/12/24	Reading Day (No lecture)		
12/19/24	**Final** (Tentative)		N/A

Key dates:

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

Date	Event
9/5/24	Semester begins, first class meets
10/17/24	Mid Term
11/26/24	It's a Tuesday but we will have a class
11/28/24	No class – Thanksgiving
12/19/24	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	20%
Mid term	25%
Final	25%
Classwork	30%

The Classwork consists of:

1. Participation in the class and
2. Three/Four surprise quizzes.

The quizzes will be held in the classroom and there will be no preannouncement of the dates. There will be no makeup for these quizzes.

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 based on homework assignments, exams/projects, 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 three or four surprise quizzes.

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 10/17/2024 from 6:00pm to 8:30pm and the Final will be held on 12/19/24 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.

You may be assigned programming projects instead of exams, in that case it will be for 3-to-4-hours duration, in class on the same date as exams.

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 must 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 assignments 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, Kupfrian 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