Course Syllabus

ITP220 - Java Programming II

Fall 2025

Instructor: Dr. Benjamin Lamb

Instructor Information

Instructor Information

Name	Email	Office Hours	
Dr. Benjamin Lamb	blamb@virginiawestern.edu	Online by appt	
	(response within 2 business days)	https://is.gd/vwcc_lamb	

General Course Information

Description

ITP220 (Java Programming II) explores the application of advanced object-oriented (OOP) techniques to application development using Java. Emphasizes database connectivity, inner classes, collection classes, networking, and threads. *Prerequisite: ITP120 or dept approval*.

Semester Credits: 4

Course Outcomes

This course is designed to:

- Expand your knowledge of object-oriented programming (OOP) techniques by introducing advanced principles of computer programming and problem solving.
- Introduce fundamental object-oriented design patterns and resilience strategies.
- Increase object-oriented problem-solving abilities using real-world practice problems.
- Evaluate various forms of data abstraction based on metrics such as maintainability, understandability, and efficiency.
- Introduce algorithms, software architecture, and development techniques that use abstraction, encapsulation, information hiding, and advanced data structures.
- Provide a foundation for further studies in computer science and software engineering.

Online instruction will be served through Canvas LMS (learn.vccs.edu). This is a virtual and asynchronous class but does require regular engagement in Canvas LMS. Students must login to check Canvas and VCCS e-mail at least once a week. This course requires each student to complete an **Identity Verification** assignment sometime during the first two weeks. This is a requirement to pass this course.

Instructor Contact

For any issues or concerns, please e-mail me at blamb@virginiawestern.edu from your @email.vccs.edu student account and include our Course Code in the e-mail subject line ('ITP220'). Allow up to two business days for a

reply. Questions about assignments should be sent at least 48 hours prior to the due date to get a response in time.

Course Materials

Required Textbooks

To be successful in this class, students must obtain the required textbook and software listed before the second week of class starts (and ideally sooner). Required homework readings will be assigned directly from the textbook, and these readings will often form the basis of the Coding homeworks and Quizzes.

- 1. Java, How to Program, 11th edition, Paul and Harvey Deitel. (Early Objects version)
- 2. <u>Java Oracle Certified Foundations Associate Java Foundations Exam 1Z0-811 by Hanumant Deshmukh,</u>
 <u>Enthuware</u> ⇒

The second one may not be listed with the VWCC Bookstore because it is primarily a kindle book exclusively on Amazon.com (and currently costs five dollars).

Software

Java SE 21; Eclipse IDE (no cost); access to a computer for Canvas web-based lectures and assignments.

Course Outline

Course Schedule of Assignments

Module	Topic	Required Readings	Assignment Due
Mod 1 Aug 26 – Sept 9	Introduction Software Process Models Review: Classes, Objects, Methods, Arrays, Interfaces, String and Character Methods, OOP Principles	 Deshmukh, Chapters 2-3 ITP120 Review Deitel Chapters and Chapter summaries as needed; esp. Chapter 7 	1 st Intro/Syllabus Quiz due Tuesday, Sept 2, 10 AM 1 st Mod Homework and 2 nd Quiz due Tuesday, Sept 8, 10 AM
Mod 2 Sept 10 - 23	Intro to Software Testing Unit Testing (JUnit) Exception Handling Inheritance/Interfaces (Review) File IO (Reading/Writing text files) Test-Driven Development	 Deshmukh, Chapters 4 & 14 Review Deitel Chapter 9-10 as needed Deitel Chapter 11 (Exceptions) 	Mod Homework and Quiz due Sept 22, 10 AM

Mod 3 Sept 24 - Oct 7	Java Database JDBC Secure SQL with Prepared Statements/Parameterization Handling SQL Result Sets Unified Modeling Language (UML)	 Deitel Chapter 24 (Database) Deshmukh, Chapters 5-6 	Mod Homework and Quiz due Oct 6, 10 AM
Mod 4 & Midterm Oct 8 - Oct 21	GUI Frameworks JavaFX Event Handling Build Tools (Maven) Inner Classes	 Deitel Chapters 12-13 Deshmukh, Chapters 7-8 	Mod Homework and Quiz due Oct 20, 10 AM Midterm Exam Oct 20-27 Option: Register to Sit Java Foundations Cert Exam
Mod 5 Oct 28 - Nov 11	Java Collections Framework Collections class Standard Library/API Review Generics Intro to Data Structures	 Deitel Chapters 16 & 20 Deshmukh, Chapters 9- 10 	Mod Homework and Quiz due Nov 10, 10 AM
Mod 6 Nov 11 - Nov 25	Functional Programming Lambdas Streams Recursion Algorithms Analysis	 Deitel Chapter 17-18 Skim Deitel Chapter 19 Deshmukh, Chapters 11-12 	Mod Homework and Quiz due Nov 24, 10 AM
	Advanced Generics	Deitel Chapters 21-23	

Mod 7	Data Structures Continued	(ski	im)	Mod Homework and Quiz	
Nov 25 - Dec 9	Java Networking (HttpClient API)	•	Deshmukh, Chapter 13	due Dec 8, 10 AM	
	Intro to Threads				
Final Exam* Dec 10 - Dec 15	Review for Final Exam* (see below)			Final Exam OR Option: Sit for Java Foundations Cert Exam by Dec. 13	

Student Evaluation

Grade Schema

Assessment Instrument	Grade Points Each	Total Grade Weight
ID Verification	-	P/F
7 Module Homeworks	100 points each	700
8 Low-Stakes Quizzes	15 points each (1 retake)	120
Midterm Exam	80 points	80
Final Exam* (or Java Foundations Cert)	100 points	100
TOTAL		1000

Final Exam

This course let's you choose between two options for the Final Exam which is worth 100 points (10% of final grade):

- 1. You are highly encouraged, but not required, to register and sit for Oracle's Java Foundations Certification Exam (1Z0-811) online by Dec 13 (end of day). This is an industry certification and much more information about it is posted in Modules.
- 2. Or, you can choose Option #2 of taking an asynchronous, online final exam in Canvas LMS available during the college's final-exam week. The exam opens Dec 10 and closes Dec 15 by 10 am. No late submissions are accepted after the close.

Course Policies

Attendance/Participation Policy & Late-Work Policy

Your Attendance for this class is your timely submission of assignments (Quizzes, Module Homeworks, and one Identity Verification Assignment). There is a Module Coding Homework and Quiz due every other Monday by 10 AM. You can re-take the Quiz once before this deadline (viewing and correcting your first attempt is encouraged). Once the 10AM deadline passes, both assignments lock on Canvas and no submissions can be made. To streamline grading this semester: Late assignments will not be accepted except in cases of emergency. Should an emergency arise, that might affect your ability to submit an assignment on time, let me know before the due date (that is, before 10 AM on Monday).

Grading Policy

Final Letter grades are determined based on the total points earned out of 1,000. The following grading scale, VWCC's standard letter grading (no rounding and no +/-'s), is used for this course:

- A: 900 to 1,000
- B: 800 to 899
- C: 700 to 799
- D: 600 to 699
- F: 0 to 599

Thus, a final score of 900 would be an A; a final score of 899 is a B. Common arithmetic rounding is used for decimals (round half up).

Generative Al Policy

In this course, you may leverage the benefits of Generative AI tools to enhance your learning experience. AI tools can be utilized to supplement your understanding of course material, conduct research, and explore different perspectives. However, it is important to exercise discernment and ensure that their usage remains within the boundaries of academic integrity. Embrace the opportunity to harness the power of Gen AI while maintaining the principles of honesty and intellectual growth throughout the course.

Please note: Using AI may be allowed/encouraged at times in this class but always be aware that other instructors in VWCC may have different approaches and classroom policies. AI coding assistance is not considered cheating/plagiarism in my class, but it may be in your other classes. Be mindful.

Academic Misconduct Policy

Cheating is the actual or attempted practice of fraudulent or deceptive acts for the purpose of improving one's grade or obtaining course credit; such acts also include assisting another student to do so.

Plagiarism is a specific form of cheating which consists of the misuse of the published and/or unpublished works of others by misrepresenting the material so used as one's own work. Sometimes, plagiarism happens because

students aren't completely clear on what it is. Review this site: http://www.plagiarism.org/ \Rightarrow for lots more information.

In case of any Academic Misconduct issues in this course, you will be notified by your VCCS e-mail and required to make-up the assignment. If it reoccurs, a score of 0 will be given, it will be documented/written-up, and the Academic Misconduct due process will occur.

For more information, see <u>Conduct code policies</u> .

Academic Calendar

If you find yourself needing to drop or withdraw from the class, although I hope that this situation does not arise, please be aware that you must handle the withdrawal process yourself online. Make sure you do it before the Administrative Deadlines according to VWCC's Academic Calendar. The Last Day to Drop & Receive Refund and The Last Day to Withdraw w/o grade Penalty can be found there: https://www.virginiawestern.edu/academic-calendar/ \(\brightarrow\).

Incomplete's may only be granted under serious mitigating circumstances as determined by the instructor. The student must have an overall average during the course of at least 80% and have already completed all work up to the point when an Incomplete is requested. This can only be done near the end of the class, where there is just an assignment or two left and/or the final. An Incomplete gives the student additional time beyond the end of the semester to complete the course requirements. The instructor decides on an appropriate deadline. Outstanding work not completed by this agreed upon deadline result in the Incomplete being changed to an F. Incomplete's must be discussed/approved one week before the first day of the exam week for the course.

Open Computer Labs

The Cybersecurity Lab (M302) is open during select hours, and instructors are often in the room to assist students. This lab is probably your best choice for a location to work on IT/CS related coursework. The Cybersecurity Lab is only open for IT/CS program students.

An open computer lab is also available for all student use in Brown Library B112. Tutors are often available to assist students with class subject material.

The Learning Technology Center is in Brown Library at 857-7250. It offers instructional assistance, tutorial assistance; computer-assisted learning, video-assisted learning and audiovisual presentations are available to students. Other services are placement tests, Writing Center, and Math Center. Check website for more information: http://virginiawestern.edu/ltc/

ADA Disability Policy

Virginia Western Community College is committed to providing equal access to educational opportunities for students with disabilities. For more info, see VWCC's full ADA Statement: https://www.virginiawestern.edu/wp-content/uploads/2024/12/Syllabus-Statement ADA.pdf □

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Title IX Policy

Inclement Weather Policy

This course is fully online and asynchronous; we do not have set meeting times. If the College announces a closure or if widespread power/internet outages occur, any assignment with a due date during the closure/outage window will automatically move to the next business day at 10:00 AM.