

# MIST 325: BUSINESS APPLICATION PROGRAMMING

COURSE SYLLABUS      Spring 2024

## COURSE INTRODUCTION

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**Course number and name:** MIST 352, Business Application Programming

**CRN:** 11167, 3 credits.

**Class meets :** In REH 4006 on Monday, Wednesday, Friday @2:30PM – 3:20PM

**Prerequisite Courses:** C- MIST 351 - Management Information Systems.

**Course Materials:** All material is posted on [eCampus](https://ecampus.wvu.edu) (<https://ecampus.wvu.edu>) and the MIST352 GitHub repository (<https://github.com/mjahmad/MIST352.git>)

## INSTRUCTOR INFORMATION

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**Instructor:** Mohammad (MJ) Ahmad, Ph.D.

**Office location:** 2109 Reynolds Hall. **Tel:** +1(304)293-7939

**Office hours:** Please use this [tool to schedule an appointment](#), I am available on:  
Monday/Wednesday 12:30PM-2:30PM on campus/ online  
Tuesday 1:30PM-4:00PM online

**Email:** [mohammad.ahmad@mail.wvu.edu](mailto:mohammad.ahmad@mail.wvu.edu) (Emails sent to @mix.wvu.edu account will be ignored). The best and preferred method of communication is via email.

**Additional and optional channel of communication:** Zoom when needed.

## INSTRUCTIONAL MATERIALS

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### Course Required Textbooks:

- **Main text:** Starting Out with Java: Early Objects, 6th edition.  
Published by Pearson, Published 2021. ISBN-13: 9780137516803  
  
Available on Pearson (rent for around \$50): <https://www.pearson.com/en-us/subject-catalog/p/starting-out-with-java-early-objects/P200000003293/9780137516803>
- **Additional and Optional Secondary book :** Sharan, K., Davis, A.L. (2022). Programming Concepts. In: Beginning Java 17 Fundamentals. Apress, Berkeley, CA.  
  
Available immediately online for WVU students on O'Reilly for free  
<https://learning.oreilly.com/library/view/beginning-java-17/9781484273074/>

Note: Both books share many chapters and topics.

**Additional material:** Selected online resources.

## COURSE LEARNING OUTCOMES

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This course introduces students to programming business applications. We will go over fundamental programming concepts required to develop end-user business applications in an object-oriented, event-driven environment. These skills will also be utilized in the systems design and development courses. We will implement our object-oriented designs Java programming language.

Upon successful completion of this course, the student will be able to explain:

1. What is a business application?
2. What is object-oriented design?
3. How to write object-oriented programs using Java.
4. How to develop good business applications using object-oriented programming.

## COURSE OVERVIEW

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- **Programming Languages:** We'll predominantly focus on Java as our core language of instruction, although we may occasionally explore Python. Both languages have proven their mettle in the world of business and are essential tools in the industry.
- **Object-Oriented Design:** You will learn to think in objects! Implementing object-oriented design will make your code more maintainable, scalable, and generally more pleasant to work with.
- **Data and Event-Driven Environments:** This course emphasizes handling data efficiently and responding to events within your applications, ensuring you understand the dynamic world of business application development.
- **Link to Other Courses:** Concepts taught in this course often find their applications in Systems Design and Development courses within the MIS program, ensuring a cohesive learning experience.

## COURSE DESIGN, ORGANIZATION, AND ASSESSMENTS

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The class will be a combination of lectures, code run-throughs, discussions, and in-class coding assignments. It is your responsibility to follow all chapter readings and assignments and participate in class discussions. It is your responsibility to come prepared to class having read the relevant chapters. It is also your responsibility to practice the material covered in class.

- **Learning.** Students are required to read the assigned text and any additional supplemental materials hosted on eCampus.
- **Homework Assignments:** Up-to five homework assignments will be given throughout the semester (worth 25% of total grade). Each homework assignment will cover one or more

modules and will require each student / group to submit one document of their answers on eCampus or other means that will be provided in the instructions of the assignment.

- **Quizzes:** Up-to eight in-class quizzes will be given throughout the semester. Students will be notified the week before each quiz to prepare. Quizzes will be short and should be submitted during the first 20 minutes of the class. Quizzes will be multiple choice, coding fill in the blanks, and True/ False questions.
- **Exams:** Two semester-regular exams will be given, (20% of total grade) and one individual final exam (15% of total grade), covering the material in the lectures, in-class discussions, and the textbook.
- **In-class tasks:** up-to 10 in-class coding activities will be given throughout the semester. The in-class tasks are to be submitted during the class.

## REQUIRED SOFTWARE AND PRE-REQUISITE KNOWLEDGE

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To excel in this class, we will be using this software provided below, in addition to other external tools that the instructor will make available throughout the course.

1. Web browser
2. Pdf reader
3. [GitHub Desktop](#)
4. [Git](#)
5. Word and text processors (MS Word).
6. Java\6 or above ([Eclipse](#) or [IntelliJ Idea](#))
7. [GitHub](#) (online).
8. Java DB.

## GRADES

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Performance in graded assessments will be systematically recorded in the eCampus grade book. Grades are typically posted within one week following the assignment's due date. Please note, any alteration in the quantity of specific assessments will not affect their total percentage contribution to the final grade. For detailed information regarding the number and descriptions of assessments, refer to **Table 1**.

- **Grading Scale:** >90% A; 80-89.9% B; 70-79.9% C; 60-69.9% D; <60% F
- Course Grading:

**TABLE 1: ASSESSMENTS AND GRADES DISTRIBUTIONS**

Assessment	Count	% Of total grade
Homework Assignment	Up-to 5	25
Semester-regular Quizzes	Up-to 8	20
Semester Exams	2	20
Final Exam	1	15
In-class tasks	Up-to 10	15
Attendance and participation		5
Total		100%

## CLASS POLICIES

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**Attendance Policy:** Attendance is required in this class. Students are obliged to register their presence within the first five minutes of class using the designated link on eCampus. Failure to attend more than five classes without a justified excuse and prior communication with your instructor may lead to a reduction of up to 5% in your final grade

**Assessment Submission Policy:** All assessments must be submitted by Friday of the week they are assigned. Students are accountable for familiarizing themselves with all course content, tracking assignments, and noting exam dates. Course materials will be made available on eCampus or GitHub. It is imperative that assessments are submitted in the specified formats by the deadlines stated on eCampus or as outlined in the instructions. Please note that submissions via email will not be accepted. Late submissions may be declined and not graded, except in circumstances outlined by specific policies. Additionally, it is advisable for students to maintain backup copies of their work to safeguard against data loss

**Late Assignment submission:** No late assignments will be accepted and there are no exceptions to this policy. Assignments are due at the beginning of class. Also, please make sure that you strictly follow any additional instructions given in the individual assignments.

**When applicable,** the instructor has the right to apply a 20% penalty/day for late work.

**General Comments:** The instructor reserves the right to change this syllabus as time and circumstances dictate. There will be some bonuses offered throughout the semester.

## RELATED STATEMENTS

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**Institutional Policies:** Students are responsible for reviewing [policies](https://tlcommons.wvu.edu/qualitymatters/syllabus-policies-and-statements) (<https://tlcommons.wvu.edu/qualitymatters/syllabus-policies-and-statements>) on inclusivity, academic integrity, incompletes, sale of course materials, sexual misconduct, adverse weather, as well as student evaluation of instruction, and days of special concern/religious holiday statements.

**Student Evaluation of Instruction:** Effective teaching is a primary mission of West Virginia University. Student evaluation of instruction provides the university and the instructor with feedback about your experiences in the course for review and course improvement. Your participation in the evaluation of course instruction is both strongly encouraged and highly valued. Results are strictly confidential, anonymous, and not available to the instructor until after final grades are released by Admissions and Records. Information about how you can complete this evaluation will be provided later. I faithfully read my evaluations and incorporate improvements to our future classes based on useful criticism from your SEI's, so please be sure to complete these forms.

**Instructor Access:** I am always happy to meet with you then, or else any time that is mutually convenient by appointment. It is easy for me to set up a Zoom for a video chat that meets with your convenience. You are always welcome to email me with questions or to arrange a meeting. I will always respond to your emails within 24 hours, Monday through Friday. If you choose to email me, please always include the course number in the title of your email and which assessment/ issue you are reaching out about. For example, if you have a question regarding HW 2, please use something like this in your email title "MIST352- HW #2 question". I enjoy meeting with students during my office hours, am also happy to discuss possible research and collaboration research in any MIS, Software Development, Machine Learning, and Cybersecurity.

## USEFUL LINKS

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- [2023-2024 Academic Calendar](#)

## EXPECTED TIMELINE

The following schedule is an estimate schedule of the topics covered in this class along with the designated week. This might change depending on the progress of students in the class.

Week No.	Duration	Textbook chapters	Topic(s)	Assessments due (Friday of the week)
1	Jan 8-12	1 & additional resources	<ul style="list-style-type: none"> <li>- Course Introduction</li> <li>- Applications' Installation</li> <li>- Hello World =)</li> </ul>	<ul style="list-style-type: none"> <li>- Install apps.</li> <li>- GitHub creation</li> <li>- Make first commit</li> </ul>
2	Jan 15 - 19	2	Intro. to Computers, Java, and <b>Programming Concepts</b>	
3	Jan 22 - 26	2	Intro. to Computers, Java, and <b>Programming Concepts</b>	HW #1
4	Jan 29 – Feb 2	3	A First Look at Classes and Objects	
5	Feb 5-9	4	Decision Structures	Exam #1
6	Feb 12-16	4, 5	Decision Structures / Loops	
7	Feb 19-23	5	Loops and Files	HW #2
8	Feb 26 – Mar 1	6	A Second Look at Classes and Objects/ Methods	Midterm Exam
9	Mar 4 - 8	6	A Second Look at Classes and Objects/ Methods	
10	Mar 11 - 15	<b>Spring Recess – No classes</b>		
11	Mar 18 - 22	7	Arrays and the ArrayList Class	HW #3
12	Mar 25 - 29	7	Arrays and the ArrayList Class	
13	Apr 1 - 5	9	Inheritance and Polymorphism	
14	Apr 8 - 12	9	Inheritance and Polymorphism	HW #4
15	Apr 15 – 19	15	Special Topic (Databases)	
16	Apr 22 – 26	All	Course Review (Last day of classes Friday 4/26/2024)	HW #5 Final Exam (Monday Apr 29 @11:00AM)