



NORTHWEST
MISSOURI STATE UNIVERSITY
MARYVILLE | KANSAS CITY

School of Computer Science and Information Systems
44-542: Object Oriented Programming (3 hours)
Fall 2021
MWF 11:00-11:50 am Valk 111

Instructor: Dr. Denise Case

Email: dcase@nwmissouri.edu

Office hours: MWF 10:00-10:50 am, M 2-2:50 pm, T 12:30-1:20 pm, T 1:30-2:20 pm, T 2:30-3:20 pm (see NW Success 360 for signup and more information)

Office: CH 2280

Prerequisites: Graduate standing and an undergraduate course in data structures with a grade of C or better; no previous experience with object-oriented programming is necessary.

Textbook: No textbook is required; content will be available via Northwest Online.

Course description: Provides fast-paced coverage of object-oriented programming and data structures. Students will gain extensive programming experience.

Learning Outcomes:

Student learning outcomes	Assessment Methods
1.An ability to use current techniques, skills, and tools necessary for computing practice.	Scores on quizzes, engagement, projects, labs, and exams.
2.An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs	Scores on engagement, projects, labs, and exams.

In addition, after successfully completing this course student will be able to

- Apply mathematical foundations, algorithmic principles, and computer science theory in the modeling and design of computer-based systems in a way that demonstrates comprehension of the tradeoffs involved in design choices
- Analyze a problem, and identify and define the computing requirements appropriate to its solution
- Design, implement, test, and debug Java programs that incorporate
 - objects and classes
 - control structures, exceptions, enumerated types, and input and output
 - inheritance, polymorphism, interfaces, abstract classes,
 - data structures, including use and implementation of arrays and ArrayLists.

Instructional methods: Instructional methods may include lectures, practical demonstrations, classroom practice, class projects, individual projects, and interactive question and answer sessions.

Supplementary Materials: Students must have access to the following at every course meeting:

- A bound notebook with pencil/pen for taking notes and submitting written content (e.g., pop quizzes)
- Their campus-assigned laptop, in working order, with all required software
- Free Git distributed version control system
- Free TortoiseGit for integrating Git with Windows File Explorer
- Free PuTTY for creating SSH public/private key pairs
- Free GitHub and/or BitBucket educational accounts
- Free GitHub Education Pack (as needed)
- Free Chocolatey package manager for Windows
- Free Notepad++ text editor
- Free NetBeans, Eclipse, IntelliJ, Visual Studio Code or other IDE as directed by the instructor

Graded course requirements:

Category	Percent
~2 exams, final exam, quizzes	55%
Projects, labs, engagement	45%
Total	100%

Grading scale:

Graduate Credit	
Percent Range	Grade
90-100%	A
>= 80% and < 90%	B
>= 70% and < 80%	C
>= 60% and < 70%	D
below 60%	F

Tentative Course outline:

Week	Days	Date	Topics
1	Wed	Aug 18	Course orientation, Introduction to Java
	F		Java and IDE installation
2	M	Aug 23	Objects and Classes
	W		Objects and Classes
	F		Lab 01: Objects lab
3	M	Aug 30	Constructors
	W		Primitive types, Scanner
	F		Lab 02: Classes lab
4	M	Sep 6	NO CLASS / LABOR DAY
	W		Conditions, Selections
	F		Lab 03 : Conditions & Selections Lab
5	M	Sep 13	Repetition
	W		Repetition
	F		Lab 04: Control Structures lab

Week	Days	Date	Topics
6	M	Sep 20	File input and output
	W		Exam 1
	F		Exam Review and discussion
7	M	Sep 27	Arrays
	W		Array Lists
	F		Lab 05: Arrays, Array List and Scanner lab
8	M	Oct 4	Debugging
	W		Testing
	F		Lab 06: JUnit lab
9	M	Oct 11	Annotations, Main method, UML
	W		Enumerated Types
	F		Lab 07: Enumerated Types
10	M	Oct 18	Inheritance
	W		Polymorphism
	F		Lab 08: Inheritance and Polymorphism
11	M	Oct 25	Abstract classes
	W		Abstract classes
	F		NO CLASS / WALKOUT
12	M	Nov 1	Interfaces
	W		Default Methods
	F		Lab 09: Abstract Classes and Interfaces
13	M	Nov 8	Casting, Exceptions
	W		Exam 2
	F		Exam Review and discussion
14	M	Nov 15	Sorting
	W		Equals and Hashcode
	F		Lab 09: Casting and Exceptions
15	M	Nov 22	NO CLASS / THANKSGIVING WEEK
	W		NO CLASS / THANKSGIVING WEEK
	F		NO CLASS / THANKSGIVING WEEK
16	M	Nov 29	Recursion
	W		Review
	F		Final preparation and looking ahead
17 - final exam	Mon	Dec 6	Monday Dec 6, 7:30 am - 9:30 am
Course ends	Mon	Dec 6	Monday, Dec 6 9:30 am - course closes; no further work or submissions accepted

Disclaimer: Course schedule is subject to change. You will be responsible for abiding by any such changes. Your instructor will notify you of any changes.

Academic Calendar: <http://www.nwmissouri.edu/academics/calendar.htm>

Final Exam Schedule: <http://www.nwmissouri.edu/registrar/finals.htm>

Attendance: Students are responsible for interacting with the Northwest Online course site on a regular basis and meeting all deadlines.

<https://www.nwmissouri.edu/policies/academics/Attendance.pdf>

Course Expectations: This course includes the development of unique, creative applications. Students should expect to spend at least 2-3 hours on out-of-class work for every hour of instruction.

Course Conduct Guidelines:

1. Students will behave in a professional manner in all course interactions.
2. Devices including cell phones, ear phones, gadgets, and other items should be **silent and put away** during class.
3. Unauthorized use of devices during class may result in reduction in scores.
4. Be ready to work when the class is scheduled to begin.
5. Be polite and respectful to others in the class. Do not interrupt someone during a class discussion, and respect others' opinions/comments as you expect them to respect yours.
6. While COVID mitigation measures are in effect, always cover mouth and nose; if you must eat or drink during class, step outside and return with minimal impact to the class (no permission required).

Course Citation Requirements:

1. **Cite ALL Sources.** You must provide proper citation for any content including text, images, videos, and code that you did not personally develop.
2. Do not copy and paste content for any submission.
3. Failing to acknowledge assistance including internet photos, clipart, slide content, course files, shared solutions, etc. can be expected to result in a 0 on the assignment, a one-half letter grade reduction, a 0 in the course, or failing the course with an academic integrity violation.

Course Submissions: All submissions must be your own, creative, unique work. You may be asked to explain your work during class, in discussions, or in a recorded submission.

Course Grading: Grades will generally be posted within 2-7 days of the due date. If you wish to petition for additional points, please wait 24 hours. Petitions must be emailed, and must include the specific changes you are requesting, along with your reasoning on why the higher score is warranted. Challenges must be raised within seven days of the grade being posted; after seven days, grades are considered final.

Late Submission Policy: Graded activities are expected to be completed by due date. If you must miss a due date, contact the instructor in advance or as early as possible. Due dates get you ready for coming material. Keeping up is critical. On rare occasions, special challenges or obligations may make it difficult to submit on time. You typically have a one-week grace period where the work may still be submitted and graded. Late penalties will be described in the rubric. **No late submissions will be accepted during finals week. The course concludes at the end of our final time.**

Quizzes and In-class Activities: There may be short quizzes or in class activities during class. These activities may not be announced in advance and may be given at any time during class.

Arriving late for class: Students are expected to be on time for each class period.

Exam policies: Dates for exams will appear on the course website. If you must miss an exam, you must notify the instructor **prior** to the exam. Make-up exams are offered only in critical cases including illness, family emergencies, and university-sponsored trips.

Grade of Incomplete (I): Following Northwest Missouri State University policy, incomplete grades may only be given in extreme circumstances, such as illness, death in a student's immediate family, or similar circumstances beyond a student's control, and the student was unable to complete a significant portion of the course work.

University Attendance Recommendations: Students are expected to attend all classes as specified in the course syllabi for each course. It is the responsibility of the student to promptly notify their instructor when unable to attend class. Students receiving veterans' benefits should consult with the coordinator of Veterans' Affairs for the additional attendance requirements. Please review the university policy on attendance.

Excused Absences: Excused absences include attendance at a university sponsored event (documented with an excuse signed by the university sponsor prior to the event) or by circumstances considered extenuating by the course instructor.

Final exams: If an emergency occurs that prevents the administration of a course scheduled final examination, the final course grades will be calculated based on the work in the course completed to that point in time and the faculty member's considered judgment. Final exams will not be rescheduled, and a grade of "I" will not be given as a result of an institutional cancellation of a final examination.

Administrative drop: An instructor may request the Office of the Registrar delete a student from a course roster if the student has not met the prerequisite for the course as stated in the catalog, or as a result of non-attendance in the course.

Academic Administrative Withdrawal: When it is in the best interest of Northwest Missouri State University for a student to withdraw, a student will be given a W, put on administrative hold, and given notice that they are about to be withdrawn. This action will result in removal of all credits associated with courses that have yet to be completed in the semester in question and the student will be administratively withdrawn from the University. An Administrative Withdrawal does not affect the student's grade point average. Please refer to Northwest Missouri State University's Academic Administrative Withdrawal Policy .

Course Access: Course content is provided via Canvas and Northwest Online. Access to Northwest Online is at <https://nwmissouri.instructure.com/> .

University Communications: Students are expected to use their Northwest student email account for any electronic correspondence within the university. Students are also strongly advised to check their email and CatPAWS accounts on a regular basis. **Course-related emails must include the course number and section (e.g., 44-542-05) in the subject line** and close with your first and last names. Emails with the required information can expect a response within 1-2 business days, Monday through Friday. Emails lacking the required information in the subject line information may not be received and should not expect a response.

Professionalism: Students are expected to behave in a professional manner in their dealings with each other, the teaching assistant, and the instructor. E-mails should be politely written, use proper grammar, and follow the rules of capitalization.

Academic integrity policy: The students, faculty, and staff at Northwest endeavor to sustain an environment that values honesty in academic work, that acknowledges the authorized aid provided by and intellectual contributions of others, and that enables equitable student evaluation. Please refer to Northwest Missouri State University's Academic Integrity Policy at <http://www.nwmissouri.edu/policies/academics/Academic-Integrity.pdf>

Learning or Living Accommodations Request Process: Northwest Missouri State University complies with Section 504 of the Rehabilitation Act of 1973 and the Americans with Disabilities Act of 1990 [ADA] and the ADA Amendments Act of 2008 [ADAAA]. If a student has a documented disability that qualifies under the ADA/ADAAA and requests accommodations, they should review the [Accessibility and Accommodations](https://www.nwmissouri.edu/titleixequity/accessibility/index.htm) webpage at <https://www.nwmissouri.edu/titleixequity/accessibility/index.htm> for guidance, including the accommodations application and supporting documentation requirements. Contact ada@nwmissouri.edu or 660.562.1873 for further assistance. For the university policy on disability accommodation refer to <http://www.nwmissouri.edu/policies/student/Disability-Accommodation.pdf>

Non-discrimination and anti-harassment policy: Northwest Missouri State University is committed to maintaining an environment for all faculty, staff, students, and third parties that is free of illegal discrimination and harassment. Please refer to the Non-Discrimination and Anti-Harassment Policy at <https://www.nwmissouri.edu/policies/student/Title-VI-Non-Discrimination-and-Anti-Harassment.pdf>

Family Educational Rights and Privacy Act (FERPA) policy: Family Educational Rights and Privacy Act of 1974, as amended (commonly known as the Buckley Amendment), is a federal law which provides that colleges and universities will maintain the confidentiality of student education records. Please refer to the Family Educational Rights and Privacy Act (FERPA) Policy at <http://www.nwmissouri.edu/policies/academics/Family-Educational-Rights-and-Privacy-Act.pdf>

COVID-19 Classroom Mitigation: Northwest is committed to the health and safety of the University community. Face coverings are required in all instructional spaces (classrooms/labs/studios) for all students and faculty until campus vaccination and infection data allow the university to direct otherwise. Should a non-vaccinated faculty member or student make close contact with a symptomatic, COVID-19 positive student, they will be asked to quarantine and not enter University facilities (unless otherwise instructed by University Wellness) or attend class until that quarantine period is over. Faculty will provide means for students missing class because of COVID-19 quarantine or isolation to keep up with course work, but students must communicate with faculty and adhere to the quarantine/isolation start and end dates. All other illnesses or absences for personal reasons will be handled as they were before the pandemic. Northwest further asks all students and faculty to practice good hygiene and not enter University facilities or attend face-to-face classes when they feel sick. Students who do not comply with these

requirements will be subject to standard disciplinary procedures according to the Northwest Student Code of Conduct (i.e. verbal and written warnings followed by a hearing, if necessary). We thank you for doing your part to maintain our learning environment and to protect the health of fellow Bearcats.

Change in Course Delivery: It is our goal as a university to continue all courses as planned on campus. However, due to unforeseeable impacts of COVID-19 and its variants, faculty and students must be prepared to adjust course formats or mitigation strategies anytime during the semester, either permanently or for a short term. The University and faculty will communicate with students in the event such action is deemed necessary to preserve the health and safety of students and employees.

Quarantine checklist: YOUR to do list:

- Call 911 if you experience difficulty breathing or a change in your level of consciousness.
- Contact Wellness Services at 660.215.8573** with questions. You may text or call between 7 a.m. and 7 p.m. If you have an emergency outside of these hours, contact UPD at 660.562.1254.
- Notify all of your instructors of your absence and predicted date of return. They will assist you in your coursework by providing information on their strategies for distance learning. Please ensure that you have your laptop, notes, textbooks, and other necessary course materials when you enter into quarantine. Lack of engagement in your coursework during quarantine will likely result in lower grades or failure. When communicating with your instructors, you may provide them with the reason you cannot be in the classroom, but you are not required to do so.
- Stay away from all people.
- You must talk with a Wellness Services staff member every few days, either by phone, text, Zoom or Skype. **If you develop COVID-19 symptoms, you MUST notify Wellness Services immediately.** It is important for your wellbeing that Northwest maintains contact with you. We want to know you are doing okay, answer any questions you have, check for symptoms, and assist with your needs.
- To coordinate your return to class, contact Evan Rand, Assistant Director, Operations at Wellness Center, erand@nwmissouri.edu, 660.562.1348.

Behavior and Wellness: Northwest focuses on student success—every student, every day. The Wellness Center, 660.562.1348, offers free counseling for students coping with depression, anxiety, alcohol or drug misuse, relationships, and other emotional, social, and academic stressors. In addition, faculty, staff, and students who are concerned with student wellbeing can report their concerns, including anonymously, to the Behavioral Intervention Team, so that the student can be offered relevant support, at this link: Concerning Behavior Reporting Form. If you are concerned about the immediate safety of a student, please call the University Police, who have specialized training in intervention, at 660.562.1254.

Course Evaluation: At the end of this course, you will be encouraged to complete a course evaluation.

Save Your Content: The course site will not be available after the end of the semester. Save the syllabus and any materials you wish to access after the course, you may need to submit this to a

potential employer or another university in the future. We do not provide materials after completion of the course.

Syllabus Subject to Change: The syllabus is subject to change with instructor notification and students will be responsible for abiding by these changes.