



**NORTHWEST**  
MISSOURI STATE UNIVERSITY  
MARYVILLE | KANSAS CITY

**School of Computer Science and Information Systems**

**44-542: Object Oriented Programming (3 hours)**

**Section 04 : TR 09:30-10:50 am CH3400**

**Section 06 : TR 02:00-03:20 pm CH3400**

**Fall 2022**

**Instructor:** Dr. Ajay Bandi

**Office hours:** W 3-5 pm, TR 1-3:30 pm

**Phone:** 660.562.1199

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**Office:** CH 2250

**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 and supplementary materials:** 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.

<b>Student learning outcomes</b>	<b>Assessment Methods</b>
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 students 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.

**Graded course requirements:**

Category	Points
Exam 1	100
Exam 2	100
Final Exam	150
Quizzes	30
Project	50
Assignments	100
<b>Total</b>	<b>530</b>

**Grading scale:**

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

**Course outline/major topics studied:**

Week	Days	Date	Topics
1	Thu	Aug 18	Course orientation, Introduction to Java
			Java and IDE installation
2	Tue	Aug 23	Objects and Classes
	Thu	Aug 25	Objects and Classes Lab 01: Objects lab
3	Tue	Aug 30	Objects and Classes
	Thu	Sep 1	Constructors Lab 02: Classes lab
4	Tue	Sep 6	Primitive types, Scanner
	Thu	Sep 8	Conditions, Selections Lab 03: Conditions & Selections Lab
5	Tue	Sep 13	Repetition
	Thu	Sep 15	Repetition Lab 04: Control Structures lab
6	Tue	Sep 20	File input and output
	<b>Thu</b>	<b>Sep 22</b>	<b>Exam 1</b> Exam Review and discussion
7	Tue	Sep 27	Arrays
	Thu	Sep 29	Array Lists Lab 05: Arrays, Array List and Scanner lab
8	Tue	Oct 4	Debugging
	Thu	Oct 6	Testing

Week	Days	Date	Topics
			Lab 06: JUnit lab
9	Tue	Oct 11	Annotations, Main method, UML
	Thu	Oct 13	Enumerated Types Lab 07: Enumerated Types
10	Tue	Oct 18	Inheritance
	Thu	Oct 20	Polymorphism Lab 08: Inheritance and Polymorphism
11	Tue	Oct 25	Abstract classes
	Thu	Oct 27	Abstract classes Lab 09: Abstract Classes and Interfaces
12	Tue	Nov 1	Interfaces
	Thu	Nov 3	Default Methods Lab 10: Interfaces
13	Tue	Nov 8	Casting, Exceptions
	<b>Thu</b>	<b>Nov 10</b>	<b>Exam 2</b> Exam Review and discussion
14	Tue	Nov 15	Sorting
	Thu	Nov 17	Equals and Hashcode Lab 11: Casting and Exceptions
15	Tue	Nov 22	NO CLASS / THANKSGIVING BREAK
	Thu	Nov 24	NO CLASS / THANKSGIVING BREAK NO CLASS / THANKSGIVING BREAK
16	Tue	Nov 29	Recursion
	Thu	Dec 1	Review Final preparation and looking ahead
<b>17 - Final Exam</b>	<b>Tue</b>	<b>Dec 6</b>	<b>Section 04 - Tuesday Dec 06 9:40 AM to 11:40 AM Section 06 - Tuesday Dec 06 2:00 PM - 4:00 PM</b>
<b>Course ends</b>	<b>Tue</b>	<b>Dec 6</b>	<b>Tuesday, Dec 06, 4 PM - course closes; no further work or submissions accepted</b>

**Disclaimer:** The course schedule is subject to change with instructor notification and students will be responsible for abiding by these changes.

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

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

**Attendance:** 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 his or her instructor when unable to attend class. Please refer to the university policy on attendance at <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, earphones, gadgets, and other items should be silent and put away during class.
3. Unauthorized use of devices during class may result in a 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.

**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 the 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 the 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.**

**Late Submission Policy for lab assignments:** Each assigned, graded activity will have a due date posted and is expected to be completed by the due date. All the submissions must be submitted through Northwest Online. Any submission up to 24 hours after the due date will be considered a late submission. The score for late submissions will have 10% of the maximum score deducted from the actual points

**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. This final exam policy does not apply to online courses.

**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 the 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 at:

<https://www.nwmissouri.edu/policies/academics/Adding-Dropping-Withdrawals.pdf>

**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., 44-542-04,06) 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, 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 webpage at <https://www.nwmissouri.edu/titleixequity/accessibility/index.htm> for guidance, including the accommodations application and supporting documentation requirements. Contact [ada@nwmissouri.edu](mailto: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/TitleIXEquity/titlevi/>

**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 that 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>

**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.

**Disclaimer:** The course schedule is subject to change, and you will be responsible for abiding by any such changes. Your instructor will notify you of any changes.