# CS 142 - Computer Science II Java

## Course Information

- **Quarter:** Spring 2024
- **Section:** 42519
- **Credits:** 5
- **Time & Location:** MTWTh 11:30 am – 12:20 pm online
  TTh 1:30 pm – 2:20 pm Hazel Miller 104

## Instructor Information

- **Instructor:** Allison Obourn
- **Email:** allison.obourn@edmonds.edu
- **Office Hours:** see course website for up-to-date hours and by appointment.
- **Best way to contact:** Please use the email listed above to contact me. I will respond within 24 hours, usually sooner, except during holidays

### Texts, Materials, and Supplies

- Materials will be posted on our course **Canvas page** as well as an external website
- **Website:** http://allisonobourn.com/edmonds/142
  ***This will remain accessible after the quarter is over***
- **Textbook (optional)**
  - **Title:** Introduction to Java Programming, 10th Edition
  - **Authors:** Y. Daniel Laing
  - **Publisher:** Pearson Education, Inc.
  - **Copyright:** 2015
  - **ISBN:** 978-0-13-376131-3

  ***No problems will be assigned from this book*.**
- **Required Materials**
  - Access to a computer that you can install programs on.
  - Access to the most recent Google Chrome browser.
  - A working microphone and webcam.
- **Canvas**: Edmonds College uses Canvas for online learning. To use Canvas, you'll need:
  - Access to a computer or internet-enabled device
  - A reliable internet connection
  - A web browser: Firefox and Chrome work best

**Technical Support** for students is available at itsupport.edmonds.edu.

## About this Course

- **Enrollment Requirements (Prerequisites):** CS& 141 with a grade of 2.5 or higher or instructor permission.
- **Course Description:** Intermediate Java programming. Topics include algorithm development, searching/sorting, complexity/efficiency, recursion, user interface design, class relationships including composition and inheritance and an introduction to abstract data types.

- **Purpose:** CS 142 is the second in a series of three core computer science courses in Java. The purpose of this course is to give you experience working with larger, more complex object-oriented programs and to introduce you to some additional object features. We will also discuss how to do repeated tasks in a different way and how to evaluate our code for efficiency.
    - **Modality:** This is a hybrid course. This means that you are expected to **show up to labs in person on Tuesdays and Thursdays** and online for all lectures. Credit will be given for in-class activities. If you have a special circumstance let Allison know ahead of time. Everyone must attend **in person** on the day of the final.

# Learning Objectives

Upon successful completion of this course, you will be able to:

- Design and implement Java programs creating a hierarchy of classes with inheritance, composition and interface implementation.
- Create highly useable graphical user interfaces using Java tools.
- Write Java programs utilizing recursion and various searching and sorting algorithms.
- Work cooperatively in small groups to produce and test correct, efficient and maintainable programs.

# Assignment Information

### Exercises

Each week a series of small exercise problems that go along with the topics we are learning in lecture will be assigned. They will be on a platform called CodeStepByStep and organized into problem sets. All of the problems for the week will be linked from the course website and Canvas. These problems will also be linked individually from the course calendar on the days that I recommend completing them. However, you will not be marked late as long as you complete each of the problem sets by the date and time listed in the problem set. Late exercises will receive half credit.

### In Class Labs

You will be expected to participate in lab activities during our normally scheduled class time. These activities will include answering questions, going over common errors in homework solutions, and discussing sample problems interactively. You will receive credit for a lab if you attend in person on Tuesdays and Thursdays.

If you are unable to show up to a lab you can receive credit if you complete all the lab problems by 11:59pm two days after the lab and let the instructor know. You can miss 3 labs with no penalty.

### Mastery Quizzes

You may not use any books, notes, internet searches, friends, internet message boards, NetBeans, JGrasp, VSCode or other Java editors during the quizzes. You must use HonorLock to receive credit. Remember that quiz questions will be on the exams so if you use other resources you will only be hurting yourself.

**To receive credit for a mastery quiz you will need to earn 90% or higher on it**. You will receive full credit if you complete it correctly in your first 3 attempts. If you complete it correctly after 4 or 5 attempts you will receive 85% of the points and if you complete it correctly after 6 or 7 attempts you will receive 75%. **You will receive 50% of the highest score you earned if you do not achieve a score over 90% on any of your attempts.** You will have 20% deducted from your score if you do not take it by the first attempt date. If you do better on the same style of question on the exam than on the quiz, you can ask me to replace your quiz score with your exam score for that problem.

Each week you will receive at least one small problem that is the same style as the one on the quiz. You will also receive several other optional practice problems in a similar style to help you prepare.

### Exams

The midterm exam will be administered online with HonorLock. The final exam will be administered **in person on paper.** You may not use any computing devices, books, notes, internet searches, friends, internet message boards, VSCode, NetBeans, JGrasp or other Java compilers or editors during the exams.

Make-up exams will not be given except in case of a serious emergency. If you must miss an exam, even if you are sick or injured, you must contact Allison ***before*** the exam (or arrange for someone to do so). You must show evidence that you are physically unable to take the exam, such as a clear and specific doctor's note mentioning the date, exam, and reason. No make-ups will be granted for personal reasons such as travel, personal hardship, leisure, or to ease exam week schedules.

### Programming Projects

Programming projects 1 – 5 are weekly programming assignments done **individually** and submitted electronically on the course website. The final project is a bigger, multi-week project that will be completed with a group. Programs will be graded on "external correctness" (behavior) and "internal correctness" (style and design). Disputes about programming project grading must be made within 1 week of receiving the grade.

### Programming Project Lateness

Each student receives **4 "late days"** for use on programming projects. A late day allows you to submit a project up to 24 hours late without penalty. For example, you could use 2 late days and submit a program due Tuesday 11pm on Thursday by 11pm with no penalty. Once a student has used up all their late days, each successive day that an assignment is late will result in a loss of 1 point on that assignment. Regardless of how many late days you have, **you may not submit a program more than 3 days after it is due or after the last day of class**. Students will not be given other extensions unless they have extenuating circumstances as decided by the instructor.

## Course Calendar

| Week | Topics | Evaluations |
|---|---|---|
| **1** | review, `ArrayList`s | Quiz 1 & 2 |
| **2** | `ArrayList`s, searching and inheritance | Project 1 due, Quiz 3 |
| **3** | Inheritance and polymorphism | Project 2 due, Quiz 4 |
| **4** | file I/O review and recursion | Project 3 due, Quiz 5 & 6 |
| **5** | Recursion and interfaces | Project 4 due, Quiz 7 |
| **6** | GUIs | **Midterm Exam** |
| **7** | GUIs and generics | Project 5 due |
| **8** | abstract classes and complexity | Quiz 8 |
| **9** | sorting | Quiz 9 |
| **10** | sorting, exception handling and testing | Final Project due, Quiz 10 |
| **11** | | **Final Exam** |

## Grading Information (How Your Learning Will Be Assessed)

| | |
|---|---|
| 250 points | weekly programming projects |
| 50 points | final group project |
| 72 points | small problems and labs |
| 64 points | quizzes |
| 120 points | midterm **Monday, May 6** |
| 120 points | final exam **Wednesday, June 12** |

This maps to the grading scale roughly as follows. You will get *at least* the grade below for the points shown.

| | | |
|---|---|---|
| 600 points: at least 3.5 | 570 points: at least 3.0 | 530 points: at least 2.5 |
| 490 points: at least 2.0 | 450 points: at least 1.5 | 400 points: at least 1.0 |

## Final Exam and Last Meeting of Class

- **Midterm**: Monday, May 6
- **Final**: Wednesday, June 12
- **Last day of class**: June 7

## Important Dates

- **First day of classes:** April 1st
- **Last day to withdraw:** May 17th
- **Registration opening for the coming quarter:** May 16th
- **Other important dates:** Edmonds CC Academic Calendar

## Classroom Community Expectations

### Expectations for Instructor

You can expect that I will do everything I can to help you learn. I will provide timely, meaningful feedback on your work and answer emailed questions within 24 hours except over holidays. I will be available at scheduled office hours and by appointment to work individually with you over Zoom or in person.

### Expectations for Students (How to Succeed in this Course)

Your job is to do your very best to learn the course content. You can do this by keeping up with the course lectures, labs, projects and small problems. Ask questions as soon as you start to feel confused. I want to help you but I can't help you very effectively unless I know what you need help with

Keep up with your work, join in on activities, and practice, practice, practice. There is no shortcut to learning programming, but it is very satisfying once you have learned it.

## Attendance, Participation, and Classroom Climate

- You are expected to attend lectures and labs via Zoom and in person at all scheduled times. We understand that sometimes things occur that will prevent you from doing this and will make recordings of lectures available afterwards. However, these recordings are designed to be a study aid, **not a replacement for attending**.
- If you fail to participate fully in the introductory work during the first three days of the quarter, you will be automatically dropped from the course for non-attendance. If you fail to maintain at least a 60% average during the first two weeks, you will also be dropped automatically.
- After the first two weeks, if you wish to withdraw from this course, it is your responsibility to do so within the allotted timeframe. If you stop participating in the class, it will not result in an Instructor Withdrawal (V); you will receive the appropriate grade based on the number of points earned for the quarter.

## Diversity and Inclusion Statement

It is my intent that students from all backgrounds and perspectives be well served by this course, that students' learning needs be addressed both in and out of class, and that the diversity that students bring to this class be viewed as a resource, strength and benefit. It is my intent to present materials and activities that are respectful of diversity: gender, sexuality, disability, age, socioeconomic status, ethnicity, race, religion, and culture. Your suggestions are encouraged and

appreciated. Please let me know ways to improve the effectiveness of the course for you personally or for other students or student groups.

## Statement on Academic Integrity

Edmonds CC students shall demonstrate Academic Integrity. I am expected to report all violations of Academic Integrity (cheating and plagiarism) to the College. The College's database of such incidents will be monitored by the Office of the Vice President for Student Services. Data will be maintained for three years. Evidence of repeat incidents will result in additional action by the Office of the Vice President for Student Services as governed by the Student Code of Conduct.

### Policy on Academic Integrity

Programming assignments 1-6 must be completed individually; all code you submit must be your own work. You may discuss general ideas of how to approach an assignment, but never specific details about the code to write. Any help you receive from or provide to classmates should be limited and should never involve details of how to code a solution. You must abide by the following rules:

- You may not work as a partner with another student on an assignment.
- You may not show another student your solution to an assignment, nor look at his/her solution, for any reason.
- You may not have another person "walk you through" an assignment, describe in detail how to solve it, or sit with you as you write it. You also may not provide such help to another student. This includes current or former students, tutors, friends, paid consultants, people on the Internet, or anyone else.
- You may not post your homework solution code online to ask others for help. This includes public message boards, forums, file sharing sites and services, or any other online system.

Under our policy, a student who gives inappropriate help is equally guilty with one who receives it. Instead of providing such help to someone who does not understand an assignment, please point them to other class resources such as lecture examples, the reading, the tutoring center, or the instructor. You must not share your solution and ideas with others. You must also ensure that your work is not copied by others, such as making sure to log out of shared computers, not leaving printouts of your code in public places, and not emailing your code to other students or posting it on the web.

If you are retaking the course, you may resubmit a previous solution unless that program was involved in an academic misconduct case. If misconduct was found, you must write a new version of that program.

We enforce this policy vigorously by running similarity detection software a few times per quarter over all submitted student programs, including programs from past quarters. Please be careful, and contact the instructor if you are unsure whether a particular behavior falls within our policy.

In this class, cheating and plagiarism will result in an assignment or grade penalty ranging from half credit on the assignment to 1.0 lower in the course (or a failing grade in the course if the incident is on the midterm or final). A second incident in this class will result in a grade penalty ranging from a zero on the assignment to a failing grade in the course.

## Services for Students with Disabilities

Services for Students with Disabilities (SSD), located in MLT 159, ensures that programs at Edmonds College are accessible and usable by students regardless of ability. If you require an accommodation for a disability, or if you have struggled with learning in the past and might benefit from a consultation, please contact SSD online or by phone: 425.640.1320 or email: ssdmail@edmonds.edu.

## Resources for Students

Edmonds College offers a number of student resources to help you succeed. Asking for help, whether you are struggling or not, is a normal part of being a student. You may find it helpful to browse this Student Resources Guide.

# Resources for Students by Category

## Academic Support

Learning Support Center: free tutoring for math, writing, and other classes

TRIO Student Support Services: tutoring and other support for students who are the first in their family to go to college

e-Tutoring: free online tutoring for math and writing

Library: 24/7 live chat help for research and citations, free online access to ebooks, articles, and databases

STEM Study Room: free drop-in tutoring for Math, Biology, Chemistry, Physics, Computer Science, and Engineering

## Basic Needs Support (food, housing)

Edmonds CC Food Pantry: on-campus resource for students and employees facing food insecurity

Emergency Funding and Resources: help with housing costs or other financial difficulties

## Health and Well-Being

Center for Student Cultural Diversity and Inclusion: meet with a student success coach

Counseling and Resource Center: personal counseling and resources

Violence Prevention: confidential support for those who have experienced sexual assault, dating violence, domestic violence, or stalking

Wellness Center: a quiet space to study, nap, or relax

## Technology Assistance

Edmonds College IT Help Center: help with Canvas, CTC Link, Google apps, and other technologies

Canvas Log-in and Orientation: how to use Canvas and reset your password

Student Printing Information: where to print on campus

Computer Labs on Campus: location and use of on-campus computer labs for use by students

## Veterans Resources

The Veteran's Resource Center: services for Veterans including advising, help with use of VA training or benefits

## Resources for Non-immigrant Visa Students

Office of International Programs: advising and activities for non-immigrant visa students

## Student Government and Campus Involvement

Center for Student Engagement and Leadership: campus leadership opportunities

# College Policies and Guidelines

- **Non-Discrimination Statement**: Edmonds College does not discriminate on the basis of race; color; religion; national origin; sex; disability; sexual orientation; age; citizenship, marital, or veteran status; or genetic information in its programs and activities.
- **Policy on V, I, S, U, and N Grades** (include if applicable).These can be found in the online college catalog on the Academic Requirements page, under Student Grades.

- **Institutional and Instructor Withdrawal Policies**. Withdrawing from class is the process of formally dropping a class or classes after the quarter has started.

  The college may withdraw a student from a class or classes if the student has been suspended for poor conduct or a lack of academic achievement, or if a student has not paid tuition. Tuition refunds may not be provided for institutional withdrawals.

- **Emergency Preparedness**: The Triton Alert System will be used to send notifications regarding campus closures, emergency situations, or evacuation orders in the event of an emergency or inclement weather. Edmonds College students and employees are automatically enrolled to receive Triton Alerts through their college email addresses. Sign up to receive text and voice messages on your mobile or home phones and/or additional email notifications to personal email addresses.

  Include your plan for communication in the event of inclement weather or emergency.

- Please see **Student Rights, Freedoms, and Responsibilities** for guidelines for student conduct and information on disciplinary procedures.

- **Reporting Gender Discrimination and Sexual Assault:** I hope that your experience in my class and at Edmonds College is fair and respectful of your individuality, including your gender identity and sexuality. If you do experience unfair treatment, discrimination, or harassment based upon your gender identity, or if you are the victim of sexual misconduct, please report the incident so that you can receive help.

  As your instructor, I am required to report any incidents of gender discrimination or sexual harassment to the Edmonds College's Title IX Officer. If you do not wish to report an incident but would like to speak with a confidential counselor, please contact the Counseling and Resource Center.

  For more information about or examples of gender discrimination, please see Title IX and Gender Discrimination.

- **Accommodations for Religion/Conscience**: Students who will be absent from course activities due to reasons of faith or conscience may seek reasonable accommodations so that grades are not impacted. Such requests must be made within the first two weeks of the quarter and should follow the procedures listed in the college's Absence for Reasons of Faith or Conscience policy (SS 8.01Pr)

## Copyright Notice



## One Last Note

This syllabus is intended to give students guidance in what may be covered during the term and will be followed as closely as possible. However, the instructor may choose to modify, supplement, and make changes to the course in the event of extenuating circumstances, by mutual agreement, and/or to ensure better learning.