

CSC 360.001: Object-Oriented Programming II

Professor: Richard Fox

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Semester: Fall 2014

Office: GH 444

Class Meeting Time: MWF 10:00-10:50 am

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Class Meeting Place: GH 314

Web: <http://www.nku.edu/~foxr/>

Office Hours: MWF 9:00 – 9:50 am, TR 1:00 – 2:00 pm, and by appointment

Textbook:

- Introduction to Java Programming, 9th edition, Y. Daniel Liang, 2013, Pearson, ISBN: 978-0-13-293652-1.

Prerequisites and Credits:

C- or better in CSC 260 and B- or better in MAT 119, 128 or 129. 3 Credit hours. This course is required for CSC majors and is recommended for all students wishing to enroll in the MSCS program. This course is also required for CET majors who choose the Computer Science Emphasis. CSC 362 or CSC 364 is required for all Computer Science minors.

Course Topics:

Intermediate object-oriented programming concepts including inheritance, polymorphism, information hiding/visibility modifiers, and practice; recursion; graphical user interface (GUI) programming including graphics and event-driven programming; abstract classes, interfaces and exception handling; generics and the Java Collection Foundation classes; the concept of data structures and abstract data types, implementing linked lists.

Program Review Student Learning Outcomes:

- Students will learn the fundamentals of computer programming (reinforced level)
- Students will be able to design, implement, and debug program code appropriately (reinforced level)
- Students will understand the role of, and how to select, design and implement, the proper data structure(s) and associated algorithms for a given problem (introduced)
- Students will learn to select the preferred implementation method given the circumstance(s) of the problem (introduced)

Course Specific Student Learning Outcomes:

By the end of this course, students will:

- be able to implement recursive methods in Java,
- understand and be able to implement inheritance, polymorphism, abstract classes, interfaces,
- be able to implement user interfaces through Swing library classes and Graphics,
- be able to implement events including keyboard, mouse and timer events,
- understand exception handling and implement your own exception classes, try-catch blocks and throw statements,
- understand the role of Generics and implement your own generic classes in Java,
- understand data structures and be able to use the JCF classes covered in the course,
- be able to implement linked lists.

This course prepares students for more advanced topics in Data Structures and Algorithms (CSC 364).

Student Assessment:

Student grades will be determined by the student's performance on:

- 10 programming assignments to test the student's understanding of object-oriented concepts and the student's ability to solve problems in Java, worth 50% of the student's grade,
- 2 midterms and 1 final exam to test the student's ability to solve problems and understand

The grading scale (subject to curve if necessary) is:

A: 100-93	A-: 92-90	B+: 89-87	B: 86-83	B-: 82-80	
C+: 79-77	C: 76-73	C-: 72-70	D+: 69-67	D: 66-60	F: 59-0

Mid-term grades will be posted in myNKU by the deadline established in the Academic Calendar (<http://registrar.nku.edu/academiccalendar.html>). The grade is not a predictor of your final grade but merely an update. The last date to drop with a grade of W is Monday, October 27.

Programming Assignment Policies:

Each program is to be written in Java. Due dates will be announced on each assignment when the assignment is provided to the class. All assignments are due at the **beginning** of the class period of the due date. Late assignments will be accepted with a penalty of 20% per day late. Submit the following:

- the source code for your class(es) for the assignment (if you have multiple source code files, please zip them together),
- and a copy of the output, copied and pasted into a separate file (e.g., a word document or text file) or pasted at the bottom of your source code.

Assignments may be emailed (the instructor prefers hard copy submissions if possible) as long as that Email is **received at least 1 hour prior to the beginning of the class period** of the due date. If the Email arrives late or is unreadable the assignment will be considered late.

An example template of a Java program is provided on the instructor's website to indicate how you should organize and comment your code.

Programming assignments will be graded based on the following criteria:

- Did the program solve the problem?
- Did the program meet the assignment's specifications?
- Was the program well documented (commented)?
- Did the program use adequate logic?

A program that fails to compile will receive no more than 50% and most likely far less than this. It is better to attend to complete the program than to hand in one that does not compile.

In addition to these assignments, the instructor will assign daily homework problems. These problems will not be collected or graded but will allow students to test their own understanding of topics. The instructor will post answers to some of these homework problems as study aids.

All programming assignments are **individual assignments** meaning that students should work alone at all times except for clarification. If the instructor suspects students of copying off of each other or working together, the instructor will give a grade of 0 on those assignments and warn the students. A second offense will cause disciplinary actions.

Course Materials:

This course uses the instructor's website (not Blackboard!). See <http://www.nku.edu/~foxr/CSC360>. This site will contain all lecture notes (PowerPoint slides), handouts/assignments, sample programs and solutions to select problems. Download these items at your leisure. It is your responsibility to keep an eye on this website during the semester for new material.

Schedule of topics and readings:

See <http://www.nku.edu/~foxr/CSC360/schedule.pdf> including final exam information.

Absentee Policy

For financial aid purposes, the University is now requiring that attendance be monitored during the first week of class. A student will be *administratively dropped* if that student has not attended class during the first week and has not previously contacted the instructor. If for whatever reason you cannot attend class during the first week, contact the instructor to inform the instructor of your intention of staying in the class. You will receive no further warnings!

Aside from this first week, the instructor will not take attendance. It is up to the student to attend class regularly and to determine what materials were missed in the event of an absence. If an assignment is due on a date that the student is absent, it is the student's responsibility to make sure that the instructor receives the assignment prior to the beginning of class time (whether by Email or having someone reliable drop off the assignment to the instructor in his office, mailbox or classroom). If the student is to miss a class period when an exam is being given, the student **must** contact the instructor **in advance** to make arrangements for a **make-up exam**, otherwise the student will receive a 0 on that exam.

Credit Hour Policy Statement:

In accordance with federal policy, NKU defines a credit hour as the amount of work represented in the achievement of student learning outcomes (verified by evidence of student achievement) that reasonably approximates one hour (50 minutes) of classroom instruction and a minimum of two hours of out-of-class student work. For every course credit hour, a typical student should expect to spend at least three hours per week of concentrated attention on course-related work including, but not limited to, class meeting time, reading, reviewing, organizing notes, studying and completing assignments. At least an equivalent amount of time is expected for other academic activities such as online courses, laboratory work, internships, practica, studio work and other academic work leading to the award of credit hours.

Estimates of the time required for a typical student to complete course expectations are as follows:

In-class: 3 hours/week * 15 weeks	37.5 hours/semester
Reading/studying: 2-3 hours/week * 15 weeks	30-45 hours/semester
<u>Assignments: 10 * 6-8 hours/assignment</u>	<u>60-80 hours/semester</u>
Total:	140 hours/semester (approx. 9-10 hours/week)

Students who do not spend an appropriate amount of time on this course will most likely obtain a poor grade and perhaps not pass the class

Student Honor Code:

This Student Honor Code [the "Honor Code"] is a commitment by students of Northern Kentucky University, through their matriculation or continued enrollment at the University, to adhere to the highest degree of ethical integrity in academic conduct. It is a commitment individually and collectively that the students of Northern Kentucky University will not lie, cheat, or plagiarize to gain an academic advantage over fellow students or avoid academic requirements.

The purpose of the Honor Code is to establish standards of academic conduct for students at Northern Kentucky University and to provide a procedure that offers basic assurances of fundamental fairness to any person accused of violations of these rules. Each Northern Kentucky University student is bound by the provisions of the Honor Code and is presumed to be familiar with all of its provisions. Students also should aspire to conduct themselves in a manner that is consistent with the highest degree of ethical integrity in all matters, whether covered in the Honor Code or not. The success of this commitment begins in the diligence with which students uphold the letter and the spirit of the Honor Code. Students may view the complete honor code at <http://deanofstudents.nku.edu/policies/student-rights.html#policies>.

Student Evaluation of Instructor and Course:

Northern Kentucky University takes Instructor and Course Evaluations very seriously as an important means of gathering information for the enhancement of learning opportunities for its students. It is an important responsibility of NKU students as citizens of the University to participate in the instructor and course evaluation process. During the two weeks* prior to the end of each semester classes, you will be asked to reflect upon what you have learned in this course, the extent to which you have invested the necessary effort to maximize your learning, and the role your instructor has played in the learning process. It is very important that you complete the online evaluations with thoughtfully written comments.

Student evaluations of courses and instructors are regarded as strictly confidential. They are not available to the instructor until after final grades are submitted, and extensive precautions are taken to prevent your comments from being identified as coming from you. Students who complete an evaluation for a particular course (or opt out of doing so in the evaluation) will be rewarded for their participation by having access to their course grade as soon as that grade is submitted by the instructor. On the other hand, any student who does not complete the course evaluation (or opt out of doing so in the evaluation) should expect to incur a two week delay in access to his or her course grade beyond the university's official date for grade availability. To complete online evaluations go to <http://eval.nku.edu>. Click on "student login" and use the same USERNAME and PASSWORD as used on campus.

In addition, you should be aware of:

- Evaluations can affect changes in courses. Evaluations without comments are less valuable and less credible than those filled out thoughtfully. Comments that are expressed well are more effective than those that are not.
- Positive feedback is just as important as criticism. Moreover, negative evaluations without any explanation and specifics are not especially useful.
- Once grades are submitted, all evaluations are read not only by the instructor, but also by the instructor's department chairperson.
- Evaluations not only provide feedback to your instructor, but also provide information to the department chair for use in performance evaluations. This information affects reappointments, promotions, salaries, and teaching assignments.

Classroom Expectations:

Cellphones must be on vibrate (PLEASE!) You may leave the classroom at any time other than during exams as long as you do so quietly. If you come in late, please be quiet. During an exam, you may leave to answer your phone, use the facilities, etc, but please inform the instructor before leaving. While the instructor is lecturing, please be quiet. Do not engage other students in conversation. You may ask questions at any time during a lecture. Please do ask questions and please ask for more example problems if you feel you need them. You are encouraged to bring a laptop to class if you feel it will help you.

Student Retention and Disabilities Services:

Students experiencing roadblocks to academic success may seek assistance from Retention Coordinators in Student Retention and Assessment (SRA). Financial, personal, and social concerns sometimes interfere with the dedicated focus needed to be successful in college. SRA helps students connect to academic and support services, create individual learning plans, and advance successfully towards graduation. More information is available at <http://sac.nku.edu>. Call 859 572 6497 for an appointment or stop by University Center 352.

The University is committed to making reasonable efforts to assist individuals with disabilities in their efforts to avail themselves of services and programs offered by the University. To this end, Northern Kentucky University will provide reasonable accommodations for persons with documented qualifying disabilities. If you have a disability and feel you need accommodations in this course, you must present a

letter to me from the Disability Programs and Services Office (SU 303), indicating the existence of a disability and the suggested accommodations. More information can be found at <http://disability.nku.edu>.

Any questions? Please ask!

The instructor reserves the right to alter the syllabus if circumstances dictate.