Mathematics 2170: Computer Science I
Spring 2014

Instructor: Dr. Nancy Van Cleave   **Office hours**: 2–2:50 MWF, 4–4:50 M & by appt
Office: Old Main 3311   **Office phone**: 581-5228 (no voice mail)
E-mail: nkvancleave@eiu.edu   **Course Web site**: www.eiu.edu/~mathcs

Prerequisite: Credit for or concurrent enrollment in Mathematics 1441G or Mathematics 2110G.

Text: *The Art & Science of Java: An Introduction to Computer Science*, by Eric S. Roberts, Addison–Wesley, 2008.

Overview: This course provides an introduction to computer science, emphasizing the skills needed for writing computer programs in the Java language. Upon completion of the course, you should be able to:

- design algorithms to solve a variety of problems
- understand a basic subset of the Java language
- understand the basics of object-oriented program design

Course Web Site: The web site for this course provides information you will need throughout the semester. Visit this site each week to obtain lecture notes, lab instructions, files required for completion of labs, and homework assignments.

Laboratories: On Thursdays we meet in Old Main 3041 for laboratory activities. Labs are a central feature of this course, providing an opportunity to explore topics covered in lecture. Since the examinations include many of the concepts explored in the labs, understanding these activities is necessary to ensure your success in this class.

- During scheduled lab time, you are expected to focus on course-related activities. Unrelated activities, including Internet browsing, reading electronic mail, and texting are to be done at other times.
- You may talk and offer encouragement and debugging suggestions to one another, but do not look at or copy anyone else's code.
- Come to lab prepared: read the lab writeup and have drafts of the program exercises written down *before* lab begins.
- It will seldom be possible to finish all laboratory exercises during lab time. You are expected to **complete the exercises on your own time**.
- Not all labs will be worth the same number of points.
- **Unexcused late laboratory submissions will not be accepted.**

Academic Integrity:

> The work you do in this course is to be your own. You are not to discuss details of assignments with anyone other than your instructor or tutors provided by the department. The Office of Student Standards will be used to deal with instances of academic dishonesty and/or plagiarism.[1] **Never copy from another student, nor allow another student to copy your solutions. Do not let others access your computer accounts, passwords, files, or printouts.**

---

[1]See http://www.eiu.edu/~judicial/studentconductcode.php.

Evaluation: There will be weekly labs, worksheets, and quizzes, three written evening exams, and a comprehensive final exam for this course. As mentioned above, a significant portion of each exam will be devoted to material from the laboratories. The relative weights of these components are:

Exams	15% (each)
Quizzes, Worksheets	10% (total)
Laboratories, Projects	15% (total)
Final	30%

Course Grade: The following scale will be used as a first approximation to your grade:

90–100: A   80–89: B   70–79: C   55–69: D   0–54: F

In borderline cases, factors such as overall trends and the final exam score *may* be taken into consideration. It is possible that the cut-off scores given above will be lowered. As a result, an overall score of 80 is *guaranteed* to receive at least a B, whereas a score of 78 *might* result in a B.

Important Notice: To receive a final grade of C or better, you must earn a minimum of a C for both exam and lab averages. If your exam or lab average falls below a **C**, you will receive the lower of these grades. To pass this course, you must pass the final.

What is Expected of You:

- **Attend** all classes and laboratories. Attendance will be taken, and only a few absences may affect borderline grade decisions.[2]

- Invest the amount of **time** required for you to succeed. Homework and studying on average should take about 15 hours per week — more than 2 hours a day *outside* of class or lab. While there may be a few students who can succeed while spending less time than this, many students may need to spend much more time to do well.

- **Ask questions**. Ask in class, during office hours, in email, or catch me in the hallway.

- **Use my office hours**. If you cannot meet during my regular office hours, arrange an appointment with me at another time. If you miss one such appointment without notice, I may not allow you to schedule another one.

- **Use tutors** when they are available.

- **Do your own work** and submit only work that you have done wholly on your own. However, you are encouraged to study with your classmates – you may discuss the slides and text and, after they have been returned, labs as well.

- **Read** the text and **study** the lecture slides. The textbook contains valuable examples and material that cannot all be covered in lecture.

- **Keep up** with the course schedule and assignments. I do **not** accept late work, except for a university excused absence – in which case it is your responsibility to provide adequate documentation of the delay. Give yourself enough time to complete assignments in the face of technical difficulties. In the rare case that difficulties are due to problems with Eastern's network or servers, then an extension *may* be given. Quizzes cannot be made up, no matter your reason for missing them.

Notes:

- **Make-up exams are available only if agreed upon <u>before</u> the regular exam is given.** If you are unable to contact me by phone or email, you can leave a message with the departmental office (581–2028). Further, it is <u>your</u> responsibility to provide adequate documentation of the reason for the delay.

- Your **cell phone and all other electronic devices are to be turned off**, **put away**, and **kept out of sight** during lectures and labs. Failure to adhere to this rule will result in expulsion from class, perhaps permanently.

---

[2]See http://castle.eiu.edu/acaffair/catalog/2011-12/2011-12UGCatalog.pdf.

WEEK	DATES	CHAPTER READING	TOPICS	NOTES
MATHEMATICS 2170 — *Tentative Schedule* — *Spring 2014*				
1	1/13-1/17	1, 2.1	Overview, Programming	1/17 deadline to add a course
2	1/20-1/24	2	Programming	1/20 King's b-day – no classes
3	1/27-1/31	3	Java Expressions	1/27 Drop deadline / no grade
4	2/3-2/7	$4.1 - 4.2, 4.5 - 4.6$	Control Statements: iteration	
5	2/10-2/14	$4.3 - 4.4$	Control Statements: selection	2/14 Lincoln's b-day – no classes **Exam 1 − 2/13 − 7:00pm****
6	2/17-2/21	$5.1 - 5.3$	Methods: mechanics	
7	2/24-2/28	$5.2 - 5.5$	Methods: algorithms	
8	3/3-3/7	5, 6.2	Methods: using, extending	3/6 – Midterm
–	3/10-3/14			Spring Recess – no classes
9	3/17-3/21	$6.1 - 6.2$	Classes & Objects	**Exam 2 − 3/20 − 7:00pm****
10	3/24-3/28	$7.1 - 7.3$	Objects & Memory	
11	3/31-4/4	8	Characters & Strings	4/4 Deadline withdraw W
12	4/7-4/11	8	Strings & Formatting	
13	4/14-4/18	$11.1 - 11.5, 11.8$	ArraysLists	
14	4/21-4/25	11.8	ArrayLists	**Exam 3 − 4/24 − 7:00pm****
15	4/28-5/2	12	Exceptions, Files, Searching & Sorting	5/2 – Last class day
	FINAL	Sec 1 & 2	Wednesday, 5/7	12:30AM–2:30PM

** Semester exams are held in the evening to allow more time for their completion. Even though exams are designed to be finished within 50 minutes, many students appreciate additional time. If you cannot take an exam in the evening due to your work schedule for example, let me know and we'll find an alternative time.

The final exam is scheduled per University policy.