

Brief Course Description

Introduction to computers and computer programming intended for non-majors is appropriate for those seeking a practical introduction to computer programming. Topics include the use of data types and variables, programming control constructs supported by modern languages, input/output, basic concepts of object-oriented programming (such as classes, objects, encapsulation, information hiding, and code reuse), as well as graphical user interfaces. No previous computer experience assumed. Not suitable for intended computer science or computer engineering majors except those who have absolutely no experience using a computer. Admitted computer science and computer engineering students should not take this course.

Prerequisites

There are no formal prerequisites for this course. However, if you have never used a computer before or do not feel comfortable using web browsers, email clients, instant messaging programs, word processors, or spreadsheets and would like a general introduction to these type of concepts, this is not the course for you. In this course, we will be designing and coding computer programs in a modern high-level language (Java).

Schedule of Topics

The following is a tentative list of topics. A more detailed schedule is maintained on the course website and should be checked often for updates. Note that this listing does not imply ordering.

The Java Programming Language

- Java syntax
- Java programming environment
- Dealing with compilation errors
- Basic debugging skills

Object-oriented programming basics

- Objects
- Classes
- Introduction to inheritance
- Encapsulation

Graphical programming

- Dealing with animated objects on the screen
- Collision detection
- Gravity

Object Interaction and Behavior

- Calling methods
- Writing methods(including the use of return types and parameters)
- Constructors (using and writing)
- If-statements (conditional logic)
- Instance variables (fields)
- Assignment statement
- Variables and references
- Loops
- Arrays
- Strings
- Lists
- Method overloading
- Introduction to Class libraries (Java standard libraries)

Course Objectives

At the end of this course, students will have been introduced to several of the main concepts in computer programming including sequence, selection, and iteration and object-oriented design and programming. Students will be able to use these constructs to design a solution to solve a simple problem and create a small to medium sized software program. Students will have also been introduced to some of the main concepts of object-oriented design and programming and be able to solve and program object-oriented solutions for problems.

Textbooks and Materials

The required textbook for this course is:

- **Michael Kölling. 2010. Introduction to Programming with Greenfoot: Object-oriented programming in Java with Games and Simulations, Pearson Education. (ISBN 10: 0-13-603753-4)**
- This book is also available as an eBook through the publisher's website: <http://www.coursesmart.com> using ISBN: 0136025307
- Kindle edition is also available from amazon; you don't need a Kindle to read a kindle book. You can download a kindle reader to your computer/laptop.
- You will also need a license for the TopHap Monacle (web base class room interaction system). It may be cheaper from the web site of this tool. See: <http://www.tophatmonocle.com/>

Course Organization

The course has both a lecture component and a recitation component. Each component plays a role in helping you achieve the objectives of the course. In order to do well in this course, you need to participate in both components.

- **Lectures**

The conceptual and theoretical course content will be delivered primarily in the lectures, complemented by readings from the text books. You must review readings prior to attending a lecture, and you are expected to review the readings again, along with any notes you took, after the lecture. Some of the topics will be difficult. It is therefore absolutely essential that you ask questions whenever something is said which you do not understand.

Class interaction tool: We will be using this tool for interaction during the class lecture.

This tool is called Tophat Monacle and you are required to get a license and register as a student. The website is <http://www.tophatmonocle.com/>

You are expected to attend all lectures. If you are unable to attend a lecture because of sickness or similar reasons, make sure you get the notes from a classmate. If you are out of class for an extended period of time because of sickness, notify your instructor as soon as possible, and see your instructor immediately upon your return in order to determine how to catch up.

- **Recitations**

The recitations are an integral part of the course. In each recitation section, the instructor will answer questions about the currently assigned programming assignments (called labs). You are free to ask any questions about the labs and get assistance from the instructor during this

time on your personal assignment. Recitations meet in Bell 340, you are free to work on your assignments during this time. It is possible that you will be able to finish your lab work during the recitation time. However, it is also possible that you will need to work outside of lab time to finish the assignments.

Recitations do not meet on the first week of classes.

16315	CSE 113LR	A1	REC	T	9:00 AM - 10:50 AM	Bell 340
16398	CSE 113LR	A2	REC	W	10:00 AM - 11:50 AM	Bell 340
14891	CSE 113LR	A3	REC	R	3:00 PM - 4:50 PM	Bell 340
14574	CSE 113LR	A4	REC	R	11:00 AM - 12:50 PM	Bell 340
12832	CSE 113LR	A5	REC	T	1:00 PM - 2:50 PM	Bell 340
12025	CSE 113LR	B1	REC	W	12:00 PM - 1:50 PM	Bell 340
12123	CSE 113LR	B2	REC	R	9:00 AM - 10:50 AM	Bell 340
14587	CSE 113LR	B3	REC	F	10:00 AM - 11:50 AM	Bell 340
12030	CSE 113LR	B4	REC	W	2:00 PM - 3:50 PM	Bell 340

Class time and office hours

- **CSE113A: MWF : 9.00 – 9.50AM 220 NSC**
- **CSE113B: MWF : 2.00-2.50PM 101 Davis**
- **Office hours: MWF 10.10- 11.10 AM 345 Davis**
- **How to reach me at other time? Send me email: bina@buffalo.edu**
- **My web page: <http://www.cse.buffalo.edu/faculty/bina>**

Course Evaluation

The following indicates the grade breakdown which will be used in assigning grades in the course. The right is reserved to make small adjustments to the breakdown if it is necessary.

- **Exam component (50% of final course grade)**
There will be two exams: one during the mid-term (class exam: 50 min: 20%) and another comprehensive exam during the final exam week (180 min: 30%). No make-up examination will be available. You must bring a valid form of picture ID with you to each examination (a UB Card will suffice). Please take note of the scheduled dates for the exams.

- **Class participation (20% of final course grade)**
This will involve (i) attendance and (ii) using the Tophat Monacle system to answer questions during lecture classes. More information about this will be explained in lecture.
- **Programming Assignments (30% of final course grade)**
There will be 6 programming labs assigned throughout the semester. We will take best 5 scores out of the 6 lab scores. That is, you perform poorly in one of the labs due to some unforeseeable reasons, you may still get full credit for the labs.

- **Letter Grades (tentative)**

The following table indicates the number to letter grade mapping I will use to assign final grades at the end of the course. I will curve the overall grade according to the overall performance of the class.

Score %	90 –100	85 –89	80 –84	75 –79	70 –74	65 –69	60 –64	55 –59	50 –54	0 –49
Grade	A	A-	B+	B	B-	C+	C	C-	D	F

Re-grading

If you have a question about the grading of any piece of work, you should consult with your recitation TA. Any questions about the grading of a piece of work must be raised within one week of the date that the work was returned by the instructor. In other words, if you do not pick up your work in a timely fashion, you may forfeit your right to question the grading of your work.

Incomplete (I) grades

We will follow the UB Undergraduate Catalog Statement on Incomplete Grades, found in the Undergraduate Catalog. University and department policy dictate that "I" grades can be given only if the following conditions are met:

- An Incomplete will only be given for missing a small part of the course.
- An Incomplete will only be given when the student misses work due to circumstances beyond his/her control.
- An Incomplete will only be given when the student is passing the course except for the missed material.
- An Incomplete is to be made up with the original course instructor within the time specified by the appropriate University regulation, and usually within the following semester.
- An Incomplete will not be given to allow the student to informally retake the entire course, and have that grade count as the grade of the original course.

Incompletes cannot be given as a shelter from poor grades. It is your responsibility to make a timely resignation from the course if you are doing poorly for any reason.

Disabilities

If you have a diagnosed disability (physical, learning, or psychological) that will make it difficult for you to carry out the course work as outlined, or that requires accommodations such as recruiting note-takers, readers, or extended time on exams or assignments, you must consult with the Office of Disability Services (25 Capen Hall, Tel: 645-2608, TTY: 645-2616, Fax: 645-3116, <http://www.student-affairs.buffalo.edu/ods/>). You must advise your instructor during the first two weeks of the course so that we may review possible arrangements for reasonable accommodations.

Counseling Center

Your attention is called to the Counseling Center (645-2720), 120 Richmond Quad. The Counseling Center staff are trained to help you deal with a wide range of issues, including how to study effectively and how to deal with exam-related stress. Services are free and confidential. Their web site is <http://www.studentaffairs.buffalo.edu/shs/ccenter/>

Distractions in the Classroom - Behavioral Expectations

The following is the text of a policy adopted by the Faculty Senate. You are expected to know and adhere to this policy.

The Student Conduct Regulations. Classroom "etiquette" expectations should include:

- Attending classes and paying attention. Do not ask an instructor in class to go over material you missed by skipping a class or not concentrating.
- Not coming to class late or leaving early. If you must enter a class late, do so quietly and do not disrupt the class by walking between the class and the instructor. Do not leave class unless it is an absolute necessity.
- Not talking with other classmates while the instructor or another student is speaking.
- If you have a question or a comment, please raise your hand, rather than starting a conversation about it with your neighbor.
- Showing respect and concern for others by not monopolizing class discussion. Allow others time to give their input and ask questions. Do not stray from the topic of class discussion.
- Avoiding audible and visible signs of restlessness. These are both rude and disruptive to the rest of the class.
- Focusing on class material during class time. Sleeping, talking to others, doing work for another class, reading the newspaper, checking email, and exploring the internet for other than course work are unacceptable and can be disruptive.

Academic Integrity

Source: [http://www.cse.buffalo.edu/academics-academic integrity.shtml](http://www.cse.buffalo.edu/academics-academic%20integrity.shtml)

The academic degrees and the research findings produced by our Department are worth no more than the integrity of the process by which they are gained. If we do not maintain reliably high standards of ethics and integrity in our work and our relationships, we have nothing of value to

offer one another or to offer the larger community outside this Department, whether potential employers or fellow scholars. For this reason, the principles of Academic Integrity have priority over every other consideration in every aspect of our departmental life, and we will defend these principles vigorously. It is essential that every student be fully aware of these principles, what the procedures are by which possible violations are investigated and adjudicated, and what the punishments for these violations are. Wherever they are suspected, potential violations will be investigated and determinations of fact sought. In short, breaches of Academic Integrity will not be tolerated.

Departmental Statement on Academic Integrity in Coding Assignments and Projects

The following statement further describes the specific application of these general principles to a common context in the CSE Department environment, the production of source code for project and homework assignments. It should be thoroughly understood before undertaking any cooperative activities or using any other sources in such contexts.

All academic work must be your own. Plagiarism, defined as copying or receiving materials from a source or sources and submitting this material as one's own without acknowledging the particular debts to the source (quotations, paraphrases, basic ideas), or otherwise representing the work of another as one's own, is never allowed. Collaboration, usually evidenced by unjustifiable similarity, is never permitted in individual assignments. Any submitted academic work may be subject to screening by software programs designed to detect evidence of plagiarism or collaboration.

It is your responsibility to maintain the security of your computer accounts and your written work. Do not share passwords with anyone, nor write your password down where it may be seen by others. Do not change permissions to allow others to read your course directories and files. Do not walk away from a workstation without logging out. These are your responsibilities. In groups that collaborate inappropriately, it may be impossible to determine who has offered work to others in the group, who has received work, and who may have inadvertently made their work available to the others by failure to maintain adequate personal security. In such cases, all will be held equally liable. These policies and interpretations may be augmented by individual instructors for their courses. Always check the handouts and web pages of your course and section for additional guidelines.

Departmental and Course Policy on Violations of Academic Integrity

If, after following the procedures required by the University for investigation of suspected breaches of academic integrity, a student is found guilty, the policy of the department of Computer Science & Engineering is that the student minimally receive a grade of F in the course