# Syllabus

## Spring 2009

### CS 10051 - Introduction to Computer Science Syllabus

**instructor**
Dr Johnnie Baker

**class**
CS 10051-005/006, call number 11783/11784
2:15 - 3:05 MWF, room 228 MSB,

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<thead>
<tr>
<th>Section</th>
<th>Lab:</th>
<th>room</th>
<th>Instructor</th>
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<td>005</td>
<td>2:15 pm - 4:10 pm T</td>
<td>139</td>
<td>Mike Yuan, MSB, Instructor</td>
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<td>006</td>
<td>2:15 pm - 4:10 pm H</td>
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<td>Mike Yuan, MSB, Instructor</td>
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**office**
260 MSB

**office hours**
1:00 - 2:00 MWF and by appointment

**my website**
www.cs.kent.edu/~jbaker

**class website**
www.cs.kent.edu/~jbaker/CS10051-Sp09

**email**
jbaker@cs.kent.edu (Please use this email address rather than my kent.edu address as I check it more frequently).

**voice mail**
(67-) 29061

**office phone**
(67-) 29061

**CS dept.**
office: 233 MSB
phone: (67-) 29980

**lecture textbook**
*Invitation to Computer Science, C++ edition, 4th Edition*
Judith Gersting, G. Michael Schneider
Thompson/Course Technology, Copyright 2007
http://www.course.com/catalog/product.cfm?isbn=978-1-4239-0141-9&CFID=7189466&CFTOKEN=93312120 or
http://academic.cengage.com/cengage/catalog.do?courseid=CKS02&disciplinenumber=200&codeid=Z391&codeFlag=true

**lab textbook**
*Invitation to Computer Science Laboratory Manual: C++ and Java, Kenneth Lambert, Thomas Whaley*

**tests during term**
Two tests (i.e., an early midterm and a late midterm) will be given during the semester. Each exam will be 20% of your final grade. The tests will be announced at least one week in advance.

Normally some questions similar to questions on earlier tests may are included
on all but the first test. As a result, you should review your earlier tests when preparing for your late term test and your final exam.

Students are expected to take all examinations at the scheduled time. If a missed exam is not excused, your grade for that exam will be zero. To receive an excused absence, you must either contact me in advance and receive permission to be absent or else present documented evidence of illness or of an individual/family emergency situation.

Routine doctor or dental appointments are not an excuse for missing a scheduled examination. A death in the immediate family requires a confirmation of the death and your very close connection to that individual.

| homework & class participation | 10% of the final grade. Includes class participation, homework presentations in class, homework, and any pop quizzes. You will receive a grade of zero on any pop text missed, unless your absence is excused. Either excessive class absences (i.e., more than 3 unexcused absences) or failure to turn in your homework on time (unless excused) can severely damage your homework & class participating grade. A poor grade in this category can lower your grade by a full letter. |
| lab | 30% of the final grade. |
| final exam | 20% of the final grade. |

The final exam will be comprehensive and will cover material from the entire course. Students are encouraged to also study their earlier tests, as some similar questions to the early term and late term exams are likely to be included on the final exam.

The final exam will be given at the time indicated in the schedule of classes exam schedule.

| final exam time | 12:45 - 3pm on Wednesday May 13. The time of the final is fixed by the University and can not be changed. |
| grading scale | The University +/- grading scheme is used, which (ignoring rounding of decimals) is as follows: 93-100 is A, 90-92 is A-, 87-89 is B+, 83-86 is B, 80-82 is B-, 77-79 is C+, 73-76 is C, 70-72 is C-, 67-69 is D+, 60-66 is D, and below 59 is F. Numeric scores are not converted to letter grades until the end of the semester. |
| prerequisite | Prerequisites for this class is two years of high school algebra. For more details, see the course description in the catalog. This class is a prerequisite for CS 23021, Introduction to Object Oriented Programming. |
| overview | CS 10051 is broad introduction to computer science. Many important concepts underlying computer science are covered. This includes the algorithmic foundations of computer science and the expression of algorithms as pseudocode. A number of algorithms are examined including sequential search, find greatest, selection sort, and binary search. The time efficiency of algorithms and Big-O classification are discussed. Next, computer hardware and organization are discussed. In particular, the basic building blocks of a computer, e.g., binary numbers, Boolean logic, gates, and... |
circuits to add and compared, are studied. Using these elementary pieces, the construction of a CPU and a Von Neumann style computer is studied. We study a typical instruction set for this type of machine and its corresponding assembly language. Basic pseudocode control structures are implemented in assembly language.

We next see how layers of software can be used to hide the complexity of these machines and make them easier to use. We study the virtual machine environment provided by the operating system and others system software. The virtual machine environment allow us to program and run algorithms using tools like text editors, assemblers, and loaders, rather than dealing with detail machine specifics. Computer network basics are studied next.

The final step in this hierarchy is to see how a programming language provides another layer of software that makes these machines even easier to use, and allow us to program in a more human-oriented language. The language C++ is introduced as an example of a high-level programming language. However, we stop with Section 8.6 and leave the OOP (object oriented language) and discussion of functions in C++ to courses CS1 and CS2. Finally, as time permits, various topics from chapters 9-15 are covered.

This course includes a 2 hour weekly lab that provides experience with the concepts covered in the lectures.

The assigned reading assignments will be made in class. They may also be posted on the course website. These should be read in advance of the coverage of this material in class. This will allow you to ask questions in class and clarify any concepts that are unclear. You should read the assigned material both before and following the class period when it is covered. The class will generally cover material in the same order as the text book, but there may be exceptions. These exceptions will be discussed in class and will be the order material is covered in my PowerPoint slides, which will be posted on the class website. It is the student’s responsibility be aware of what material in the text that is currently being covered. Ask me if you are unsure of the text material currently being covered. A pop quiz may cover topics from the reading assignment for the current class.

Regular attendance is important in this class. There is a strong correlation between class attendance and grade performance in this class. On the rare occasions that you cannot avoid being absent, you are responsible for getting class notes and assignments. While class slides posted on the class website will provide information about the material covered in class, these will not include some important information such as discussion of points on slides, class discussions, and information written on the board. To receive an excused absence, you must either contact me in advance and receive permission to be absent or else present documented evidence of illness or of an individual/family emergency situation. Routine doctor or dental appointments are not an excuse.
for missing a scheduled examination. A death in the immediate family requires a confirmation of the death and your very close connection to that individual. Either excessive class absences (i.e., more than 3 unexcused absences) or failure to turn in your homework on time (unless excused) can severely damage your homework & class participating grade. A poor grade in this category can lower your grade by a full letter.

The official registration deadline for this course is February 1, 2009. University policy requires all students to be officially registered in each class they are attending. Students who are not officially registered for a course by published deadlines should not be attending classes and will not receive credit or a grade for the course. Each student must confirm enrollment by checking his/her class schedule (using Student Tools in FlashFast) prior to the deadline indicated. Registration errors must be corrected prior to the deadline.

Cheating and plagiarism of any type will not be tolerated and will be dealt with in accordance to the University's Administrative Policy and Procedures Regarding Student Cheating and Plagiarism (condensed version). Unattributed copying from another webpage is also considered plagiarism. The Computer Science Department's Academic Policy involving Programming provides information about what is considered to be plagiarism or cheating regarding writing programs.

See academic sanctions for a list of the approved sanctions for student cheating or plagiarism.

University Policy 3342-3-01.3 requires that students with disabilities be provided reasonable accommodations to ensure their equal access to course content. If you have a documented disability and require accommodations, please contact the instructor at the beginning of the semester to make arrangements for necessary classroom adjustments. Please note, you must first verify your eligibility for these through Student Accessibility Services (contact 330-672-3391 or visit www.kent.edu/sas for more information on registration procedures).

Please turn off any wireless phones, beepers, or other noise making devices before class begins. Please be considerate, obviously it is a distraction to the rest of the class when one of these devices begins making noise or conversations occur.

If you need to leave class early please inform the instructor before class begins and, if possible, sit near the door.

If you have any problems, including understanding the material that we cover in class or using the computer, please talk to me.