Spring 2009

CS 141: Computer Programming - I

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CS 141 Computer Programming - I
Spring 2009 - Lecture (31286) Section 1
Last Update Friday March 13, 2009 at 3:00 p.m.

Monday, Wednesday, and Friday 1:30 – 2:20 p.m., Russ 145 (Lecture)
Plus one of the following lab sections:

<table>
<thead>
<tr>
<th>Sect</th>
<th>Time</th>
<th>Day</th>
<th>Room</th>
</tr>
</thead>
<tbody>
<tr>
<td>5</td>
<td>4:10 p.m. - 5:50 p.m.</td>
<td>Tu</td>
<td>RC 152A</td>
</tr>
<tr>
<td>6</td>
<td>4:10 p.m. - 5:50 p.m.</td>
<td>W</td>
<td>RC 152A</td>
</tr>
<tr>
<td>7</td>
<td>4:10 p.m. - 5:50 p.m.</td>
<td>Th</td>
<td>RC 152A</td>
</tr>
</tbody>
</table>

Description: This course provides a general introduction to the fundamentals of computer programming. Examples from and applications to a broad range of problems are given. No prior knowledge of programming is assumed. The concepts covered will be applied to the Java programming language. Students must register for both lecture and one laboratory section. 4 credit hours. Prerequisite: MTH 127 (College Algebra) or equivalent.

Instructor: Mr. Michael Ondrasek Office RC 450 email is michael.ondrasek@wright.edu. Office hours: Tuesday and Thursday 12:30 pm – 3:30 pm, Friday 8:00am – 11:00 am, and by appointment.

Teaching Assistant: Ms. Chitra Srinivasan, srinivasan.13@wright.edu and Brian Ingle, ingle.7@wright.edu office location: RC 316, office hours to be announced.


Textbook Web Resources: See ftp://ftp.aw.com/cseng/authors/gaddis/java/Control_Objects/3e for the text source code appendices, and sample labs/programs. There are other links that may be of use, such as the download of the Sun JDK at http://java.sun.com. The text CD comes loaded some of this information plus other useful tools.

WebCT: http://wisdom.wright.edu If you are new to WebCT, please read the opening web page instructions for students. WebCT allows you access to your grades as well as lab assignments and submittals. We will post much of the course materials on WebCT.

Grading: Mid-term exam and quizzes: 20% (see calculation below); comprehensive final: 30%; programming lab assignments: 50%.

Mid-term and quizzes = 100*(YourMidTermScore+YourQuizPoints)/(MaxMidTermPoints + 0.85*MaxQuizPoints)

Final grade is based on the course average: A: 100-90, B: less than 90-80, C: less than 80-70, D: less than 70-60, F: less than 60-0 unless you get less than 70% of the possible points on your programming lab assignments in which case you fail the entire course regardless of your overall course average.

Policy: There are no late/early/makeup exams or quizzes unless verifiable emergency and acceptable documentation in writing is provided to the Instructor. Although verbal or e-mail notification can be provided, written documentation is required. Quizzes may be unannounced and/or take-home. Also some quizzes may have zero point value (practice). No quiz scores will be dropped, but only portion of the points will be counted as noted in the grade calculation. All work must be your own; sharing of program code/take-home quiz solutions will result in a...
grade of "zero" for all those involved. Official university policy will be followed in cases of academic
dishonesty. Do not show others your programs and do not look at someone else's code. However, sharing ideas and
general computer skills with others outside of class is encouraged.

Expectations of Students: We will from time to time take attendance, but attendance at lecture is not required
although it is strongly encouraged and expected. The Instructor considers it essential to your success in this course
that you attend all lectures and lab sessions. Students are expected to study the text. Even when you don't attend
class, you are still responsible for material covered in lecture, lab, and in your text readings. If you miss a
lecture, you may also miss a quiz. If you miss an unexcused quiz you will receive a zero score. Students are
expected to be on time for lecture and lab sessions: lectures and labs start promptly. Early departure from lecture or
lab may be unavoidable, but it is expected that this would be quite unusual. The Instructor feels that it is important
that you have your own copy of the correct textbook and edition indicated above. If you have a computer at home, it
is important that you practice programming using software discussed in class. If you do not have a computer, it is
expected that you will use the computers in Russ Center Room 152C (or other campus locations) to practice
programming skills. Questions are encouraged in lecture and lab; however, if there are no questions it is assumed that
students understand the lecture, have read, and understand the text and lab materials. If you are having trouble with
programs or text readings, it is expected that you will ask questions in class, come during office hours for help, or
make an appointment to discuss your questions as needed. Corresponding with the Instructor or Teaching Assistants
by e-mail is a good way to get help with text readings or programming assignments. Finally, it is expected that
students will follow the Instructor's recommendations concerning printing of slides and other course materials. In
order to minimize handouts, you are expected to print your own copies before lecture whenever possible. The
computers in Russ Center Room 152C provide all registered students with the ability to freely print their own copies.
Please follow guidelines given in lecture on how to make the best use of the computing and printing resources.

Suggestions: Get an early start on each programming assignment. Most often you will not complete the
programming assignment in the 50-minute lab sessions. You are urged to budget your lab time wisely and expect to
spend additional time outside of the formal lab to complete your programming assignments. Get acquainted with the
CD/online textbook materials: study the text Preface carefully. You should print, review, and study online materials
recommended by the Instructor and Teaching Assistants. You can download the source code for the text examples to
try them out. Whenever possible study your text in front of a computer and actively get involved in trying out the
programming concepts on your own. You should try to do all text checkpoint, review questions, and exercises. This
can be the most effective way to be successful in the course. If you are uncertain about how you should do this,
please discuss with the Instructor or Teaching Assistant. It would be a very good idea to get your own USB 2.0
compatible flash drive (also known as a "thumb drive" or "min-drive") for use in labs and possibly at home. See the
Instructor or Teaching Assistants for recommendations and usage. Always backup your programs! Keep copies of
your work in several different places. E-mail yourself a backup copy.

Programs: Programming lab assignments will be issued in class, during the lab sessions, or on WebCT. Each
assignment will state the due date. Assignments usually will be one or possibly two weeks in duration. As noted
above, you must earn at least 70% of the possible points on lab assignments in order to pass the course.
Programming assignments are to be submitted on the due date. Late assignments are accepted at the discretion of the
Teaching Assistant, who will impose a late penalty.

Syllabus Changes: The Instructor will not make changes to this syllabus without notification and understanding of
all the students in the class. New paper copies will be provided. Changes would be required for the following
reasons: (1) to correct mistakes, (2) to improve student learning, (3) to clarify misunderstands, or (4) to correct serious
inconsistencies in policies and/or content compared to other concurrent lecture sections sharing the same labs.

Schedule: See the table below. Topics and order of topics may vary. Exam dates are firm. The topics to be covered
each week are listed, followed by the accompanying sections in the text. Not all sections listed are directly covered in
detail in class. This schedule is subject to change.
<table>
<thead>
<tr>
<th>Week</th>
<th>Topic</th>
<th>Readings*</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Computer Systems: Hardware and Software, Programming Languages, The Programming Process, Object-Oriented Programming</td>
<td>Chapter 1</td>
</tr>
<tr>
<td>2</td>
<td>Input and Output methods, Primitive Data Types, Arithmetic Operations, Conversion Between Primitive Data Types, Constants, The String Class</td>
<td>Chapter 2.1 - 2.9</td>
</tr>
<tr>
<td>3</td>
<td>Scope, Comments, Keyboard Input, Dialog Boxes, Common Errors to Avoid</td>
<td>Chapter 2.10 - 2.15</td>
</tr>
<tr>
<td>4</td>
<td>The if, if-else, if-else-if, and switch Statements; Logical and Conditional Operators; The DecimalFormat Class and printf Method</td>
<td>Chapter 3</td>
</tr>
<tr>
<td>5</td>
<td>The while, do-while, for, and Nested Loops; The continue and break Statements</td>
<td>Chapter 4.1 - 4.9</td>
</tr>
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<td></td>
<td><strong>Exam: Friday May 1st</strong></td>
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<tr>
<td>6</td>
<td>File Input and Output, Random Class, Introduction to methods</td>
<td>Chapter 4.10 - 4.12 Chapter 5</td>
</tr>
<tr>
<td>7</td>
<td>Introduction to Objects and Classes, Constructors, Overloading Methods and Constructors</td>
<td>Chapter 6.1 - 6.4</td>
</tr>
<tr>
<td>8</td>
<td>Scope of Instance Fields, Packages and import Statements</td>
<td>Chapter 6.5 - 6.8</td>
</tr>
<tr>
<td>9</td>
<td>Arrays, Processing and Passing Array Contents, Returning Arrays, String Arrays, Course Evaluation</td>
<td>Chapter 8.1 - 8.7</td>
</tr>
<tr>
<td>10</td>
<td>Sequential and Binary Search, Multi-Dimensional Arrays, Selection Sort, Command-Line and Variable-Length Arguments, The ArrayList Class, Review for Final Exam</td>
<td>Chapter 8.8 - 8.14</td>
</tr>
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<td><strong>Comprehensive Final Exam: Monday, June 8th (1:00 - 3:00 pm)</strong></td>
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*Whenever any Chapter is assigned, you should also study the corresponding Review Questions and Exercises found at the end of each chapter.*