1 Prerequisites and description

This course is 4 credits. Its prerequisites are: a C or better in CMSC 131 (or a score of 5 on the Java A AP exam, or passing the CMSC department’s placement exam), and a C or better in MATH 140.

Object–Oriented Programming II is a second programming course for computer science and computer engineering majors, which is the second part of a two–semester introduction to object–oriented programming. The course provides an introduction to the use of computers to solve problems using software engineering principles. In it students design, build, test, and debug medium–sized software systems, and learn to use relevant tools. The course involves use of object–oriented methods to create effective and efficient problem solutions. Students will use and implement application programming interfaces (APIs). Programming is done in Java.

2 Contact information

2.1 Instructor contact information

<table>
<thead>
<tr>
<th>Larry Herman</th>
<th>1111 A.V. Williams</th>
</tr>
</thead>
<tbody>
<tr>
<td>(301) 405–2762</td>
<td><a href="mailto:larry@cs.umd.edu">larry@cs.umd.edu</a> (*)</td>
</tr>
</tbody>
</table>

(*) See Section 2.2 below regarding email.
Office hours will be provided in a separate handout shortly.

2.2 Email contact

Unfortunately we’re not able to explain most course material via email. It is more appropriate for class discussion or personal communication, and this is also due to the size of the course. Also please discuss regular course business with us, including administrative issues, in person when possible (before and after class are good times), and use email in case of urgent or emergency matters.

Due to time constraints and other factors it is not practical to provide detailed information or assistance regarding programming assignments via email, and attempting to do so often results in students receiving incomplete or inadequate information. Therefore please ask questions about homeworks and projects in person, either during office hours, or before or after class.

2.3 Teaching assistants

<table>
<thead>
<tr>
<th>name</th>
<th>duties</th>
<th>email</th>
</tr>
</thead>
<tbody>
<tr>
<td>Christine Lu</td>
<td>teaching, 0101 &amp; 0102</td>
<td><a href="mailto:clu@cs.umd.edu">clu@cs.umd.edu</a> (*)</td>
</tr>
<tr>
<td>Derek Juba</td>
<td>teaching, 0401 &amp; 0402</td>
<td><a href="mailto:juba@cs.umd.edu">juba@cs.umd.edu</a> (*)</td>
</tr>
<tr>
<td>Bryan Ta</td>
<td>grading</td>
<td><a href="mailto:bryanta@cs.umd.edu">bryanta@cs.umd.edu</a> (*)</td>
</tr>
</tbody>
</table>

(*) See Section 2.2 above regarding email.
Office hours will be provided in a separate handout shortly.

While the TAs will provide assistance with assignments and projects during office hours, you are ultimately responsible for developing and debugging your own homework assignments and projects, which are your coursework and you’re receiving a grade for. You should not rely on the instructional staff to get these assignments to work. If you come to office hours for help with project or homework debugging you may be guided in the right direction, after which you would be expected to resume working on the problem on your own.

3 Class webpage

Many course materials will be made available via the class webpage at:

www.cs.umd.edu/class/spring2011/cmsc132-010x

Accessing the webpage will require an ID and password to be provided in class.
4 Textbooks


  The first edition of this text is also acceptable but the second would be preferable.

  There is an E–Book edition (ISBN 978–0–470–57406–5) with the same content, which is cheaper, but notice that access to it expires after 180 days.


5 Course evaluations

Course evaluations are important, and the department and faculty and instructors take student feedback seriously. The system may be accessed near the end of the semester at [www.courseevalum.umd.edu](http://www.courseevalum.umd.edu). However, and more importantly, rather than waiting until the end of the semester to give feedback, please bring any questions or concerns to our attention during the course; preferably in person if at all possible. An instructor cannot guarantee to be able to solve any problem or change anything that is discussed, but can’t do anything if any issues that arise are not brought to their attention, so we welcome hearing any comments, questions, suggestions, or concerns that you may have.

6 Course topics (SUBJECT TO CHANGE)

The following list of topics may vary according to the pace of lecture, so their order and duration are approximate.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Approx. time</th>
</tr>
</thead>
<tbody>
<tr>
<td>Course introduction</td>
<td>1 lecture</td>
</tr>
<tr>
<td>Review of Java language features from CMSC 131</td>
<td>2 lectures</td>
</tr>
<tr>
<td>Some new Java language features</td>
<td>2 lectures</td>
</tr>
<tr>
<td>Program correctness and exceptions</td>
<td>1 lecture</td>
</tr>
<tr>
<td>Java I/O</td>
<td>1 lecture</td>
</tr>
<tr>
<td>Abstract classes and inner classes</td>
<td>1 lecture</td>
</tr>
<tr>
<td>Linear data structures</td>
<td>2 lectures</td>
</tr>
<tr>
<td>Algorithmic complexity</td>
<td>3 lectures</td>
</tr>
<tr>
<td>Recursion</td>
<td>2 lectures</td>
</tr>
<tr>
<td>Trees and heaps</td>
<td>4 lectures</td>
</tr>
<tr>
<td>Program testing</td>
<td>2 lectures</td>
</tr>
<tr>
<td>GUIs in Java</td>
<td>1 lecture</td>
</tr>
<tr>
<td>Sets and maps</td>
<td>1 lecture</td>
</tr>
<tr>
<td>Hashing</td>
<td>2 lectures</td>
</tr>
<tr>
<td>Graphs</td>
<td>4 lectures</td>
</tr>
<tr>
<td>Sorting</td>
<td>2 lectures</td>
</tr>
<tr>
<td>Concurrency in Java</td>
<td>4 lectures</td>
</tr>
<tr>
<td>Networking</td>
<td>1 lecture</td>
</tr>
<tr>
<td>Software engineering, design, algorithm strategies, and design patterns</td>
<td>5 lectures</td>
</tr>
</tbody>
</table>

7 Computing resources

All assignments can be done on the machines of your choice. The Office of Information Technology has several computing labs on campus, for those who need to use them; see [www.oit.umd.edu/wheretogo](http://www.oit.umd.edu/wheretogo). You are welcome to do your work on a home computer if you have one. There should not be any machine–specific dependencies in your code. However, if we are not able to run your program because there is a difference between your computer environment and ours, you are responsible for working with us to get your program to work in our environment.

8 Attendance and grades

Grades will be recorded on the CMSC lower–level course grade server at [https://grades.cs.umd.edu](https://grades.cs.umd.edu) and may be checked for correctness there.

Students are responsible for all academic and administrative material discussed in lecture and discussion section, regardless of whether they were in class to hear the information or not. It’s understood that students may occasionally miss class for various reasons, but email and office hours are not intended as a replacement for class attendance. A student who was not in class is expected to find out what was missed and to get notes from a classmate who was present.

After the two–week drop/add period attendance will be taken in class. Students missing more than a certain number of classes will become ineligible to receive assistance on programming projects during office hours, since the TAs are not responsible for explaining material during office hours that was already taught in class.

Laptop computers and cell phones may not be used during lecture.

Coursework will count toward the final grade according to the following percentages:
Midterms: two midterms 25% (equally weighted)
Final: will be comprehensive 20%
Programming projects: probably five or six coding assignments 30%
Homeworks probably six or seven shorter programming exercises 10% (equally weighted)
Quizzes: in discussion section 10% (equally weighted)
In-class programming exercises many Mondays in discussion section 5% (equally weighted)

The project submission and grading policies will be provided when the first project is assigned.
All projects will be graded out of 100 points, but depending upon their relative difficulty, which can’t be predicted in advance, they may not be weighted equally. Their weights will be given at the end of the semester.

Any request for reconsideration of the grading on any coursework must be submitted within one week of when it is returned. Exam regrading requests must be made in writing. Coursework submitted for reconsideration may be regraded in its entirety.

Final course grades will be curved as necessary, based on each student’s total numeric score for all coursework at the end of the semester. However, since the the grade distribution won’t be known until all coursework is graded, whether there is a curve, or what the letter grade ranges might be, can’t be predicted in advance.

Some peer code reviews may be done this semester, in which other students would provide feedback on your coding style after a homework or project assignment has been submitted, as you would do for them as well.

9 Quiz, exam, and final dates
Quizzes will be given in discussion section and will cover discussion and lecture material. They will be announced in a prior class.
The midterm exams will be held during lecture. The midterm dates will be confirmed later, and may vary depending on lecture progress and other factors.
The final exam date and time will be rescheduled only for students having another final at exactly the same time, or for students with more than three final exams scheduled on the same day. (The only courses that students who are enrolled in CMSC 132 should be able to take that have finals at the same time as its final are BMGT 221 and ENES 221.) If either of these situations applies to you, you must inform your instructor at least two weeks in advance of the final exam time for any allowances to be made. Also please inform your instructor immediately if you have a conflict with the scheduled midterm date, or any other important date as the semester progresses.
Exam #1: Friday, March 4
Exam #2: Friday, April 15
Final exam: Friday, May 13, 4:00–6:00 p.m.

10 Absences and accommodations
Besides the policies in this syllabus, various University policies may apply to students during the semester. Policies that may be relevant appear in the Undergraduate Catalog, at www.umd.edu/catalog.
If you experience difficulty during the semester keeping up with the academic demands of your courses, you may consider contacting the Learning Assistance Service in 2201 Shoemaker Building at (301) 314–7693. Their educational counselors can help with time management issues, reading, note-taking, and exam preparation skills.

10.1 Excused absences
Missing a quiz or an exam for reasons outside of your control (such as illness, religious observance, participation in required university activities, or family or personal emergency) will be considered to be an excused absence. Students requesting an excused absence must furnish documentary support of the cause of the absence. For an absence due to medical reasons documentation would be from a health care professional who treated you. Excused absences will not be given unless documentation is provided. Self-documentation of illness may not be acceptable.
In cases of illness the documentation must show that you were treated by a health professional, and that in their judgment you were incapacitated and therefore unable to attend, for an absence to be considered excused. The documentation must include the phone number of the health professional, and indicate the exact dates or times of incapacitation, which must include the date of the missed assessment.
It is the University’s policy to provide accommodations for students with religious observances conflicting with in-class assessments, but it is the student’s responsibility to inform the instructor in advance of intended religious observances that will (or may) conflict.
An excused absence for an exam will be handled either by averaging the student’s scores for the other exams (possibly a weighted average), or by giving a makeup exam. In the case of an excused absence for a quiz, rather than a makeup the score will be computed as the average of the student’s scores for the other quizzes.
A student who might miss a quiz or exam for any reason other than circumstances outside of their control must contact the instructor as early as possible (in advance) to discuss the reason. According to the University policy, an instructor is not obliged to make allowances other than for reasons such as those discussed above.

The policies for excused absences above don’t apply to project assignments. Projects will be assigned with sufficient time to be completed by students who have a reasonable understanding of the necessary material and begin promptly. In cases of protracted, serious illness, or severe emergency situations, an extension on project assignments may be considered, depending upon the circumstances.

10.2 Students with disabilities

Students with disabilities who have been certified by Disability Support Services as needing any type of special accommodations should see the instructor as soon as possible, during the schedule adjustment period.

All arrangements for exam accommodations as a result of disability must be made and arranged with the instructor at least three business days prior to the exam date, or accommodations cannot be made.

11 Academic integrity statement

The Campus Senate has adopted a policy asking students to include the following statement on each examination or assignment in every course: “I pledge on my honor that I have not given or received any unauthorized assistance on this examination (or assignment).” Consequently, you will be requested to include this pledge on each exam and project.

Please carefully read the Office of Information Technology’s policy regarding acceptable use of computer accounts and resources at www.nethics.umd.edu/aup.

Programming projects and homeworks are to be written individually, so cooperation or use of unauthorized materials on projects is a violation of the University’s Code of Academic Integrity. Any evidence of this, or of use of unauthorized materials or cooperation on exams or quizzes, or other possible violations of the Honor Code, will be submitted to the Student Honor Council, which could result in an XF for the course, suspension, or expulsion.

- In learning the course concepts students are welcome to study together or to receive help from anyone else. Students may discuss with others the project requirements, the Java language, what was discussed in lecture and discussion section, and general debugging or syntax errors.
- When it comes to actually designing, writing, or debugging a coding assignment, other than help from the instructional staff a project must solely and entirely be a student’s own work. Working with another student or individual, or using anyone else’s work in any way except as noted below, is a violation of the code of academic integrity and will be reported to the Honor Council. Questions such as “How did you implement this part of the project?” or “Please look at my code and help me find my stupid error!” exemplify disallowed cooperation.

When designing or writing projects or homeworks students are free to use information and code provided by the instructional staff, only if the source is cited in a comment in the relevant section of the program, only short sections of provided code were used, and the substantial part of a student’s program remains their own individual work.

If you have any question about a particular situation or source then consult with the instructor in advance. Should you have difficulty with a programming assignment you should see the teaching assistants in office hours, rather than soliciting help from anyone else in violation of these rules.

IT IS THE RESPONSIBILITY, UNDER THE HONOR POLICY, OF ANYONE WHO SUSPECTS AN INCIDENT OF ACADEMIC DISHONESTY HAS OCCURRED TO REPORT IT TO THE INSTRUCTOR, OR DIRECTLY TO THE HONOR COUNCIL.

Students are welcome and encouraged to compare or discuss with others their implementations of programming projects after they are graded, provided that none of the students in question still have to successfully submit that project assignment, and only if it has been announced that that project will not be extended upon in a later project.

12 Right to change information

Although every effort has been made to be complete and accurate, situations that arise during the semester could require the adjustment of any material given here. Consequently, given due notice to students, the instructor reserves the right to change any information or policies in this syllabus or in other course materials.

13 Copyright

All course materials are copyright Larry Herman (and other CMSC faculty and instructors) © 2011. All rights reserved. Students are permitted to use course materials for their own personal use only. Course materials may not be distributed publicly or provided to others (excepting other students in the course), in any way or format.