Course Information

Instructor
Steve Holtz

Email
sholtz@d.umn.edu (Email Policy)

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218–726–7664

Office
Heller Hall 319

Office Hours
Monday/Wednesday 4:20 to 5:20 PM
Friday 3:00 to 4:00 PM

Course Web Site
http://www.d.umn.edu/~sholtz/cs1521-1/s18/index.php

Teaching Assistants
See the course home page.

Text(s)

Course Prerequisite(s)
CS 1511—Computer Science I OR
CS 1581—Honors Computer Science I

A grade of C- or better is required in prerequisite course.

Course Description
Continuation of introduction to computer science. Methods for procedural and data abstraction. Focus on abstract data types. Algorithm analysis, software design and issues in ethical use of computers. Requires implementation of significant programming projects.

Course Objectives
Computer Science II continues student’s introduction to the C++ language and the concepts of abstraction, encapsulation, polymorphism and inheritance. The basic design principles of object-oriented design are discussed and
the concept of an ADT (Abstract Data Type) is introduced. The ADT concept is then elaborated on in a series of assignments and lectures covering the basic ADTs: lists, stacks, queues, tables, trees, priority queues, and graphs. By the end of the course, the student should have mastered the main concepts of object-oriented programming (OOP) and have successfully completed programming assignments in C++ on each of the basic ADTs.

**UMD’s Student Learning Outcomes**

This course supports UMD’s Student Learning Outcome 1: Demonstration of competence in a major field.

**Policies**

**Exams**
- Your valid U Card (UMD ID card) may be required at the start of every exam. If your ID is required you will not be allowed to take (or makeup) the exam without presenting it first.
- Exams are closed book, closed calculator, and closed notes.
- No makeup examination will be given without written confirmation of a University-sanctioned excused absence and prior consent of the instructor. See the course exam excused absence policy below.
- Computer Science department policy requires at least 70% of the points in this course to come from examinations (including quizzes).

**Final Exam**
- The two hour final exam is cumulative.
- It is departmental policy not to return final exams.
- Under no circumstances will a final exam be given early.
- The final exam will be administered at the time and place according to the final exam schedule and not at any earlier time. This course will adhere to UMD’s Final Exam Policy.

**Quizzes**
- Written quizzes will be given during some discussion sessions (see Course Schedule for dates). Two lowest quiz scores will be dropped. Quizzes cannot be made up without an excused absence.

**Lectures**
- Broadly disseminating class notes and/or course materials beyond the classroom community or accepting compensation for taking and distributing classroom notes and/or any course materials is plagiarism. You cannot use the lecture notes or other material from this course in any way you choose. See UMD’s Appropriate Use of Class Notes and Course Materials Policy.

**Grading**

<table>
<thead>
<tr>
<th>What</th>
<th>Weight</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm 1</td>
<td>16</td>
<td>Monday, February 12th, 2:00 to 2:50 PM</td>
</tr>
<tr>
<td>Midterm 2</td>
<td>16</td>
<td>Monday, March 26th, 2:00 to 2:50 PM</td>
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<tr>
<td>Final Exam</td>
<td>26</td>
<td>Wednesday, May 2nd, 2:00 to 3:55 PM</td>
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<tr>
<td>Quizzes (8)</td>
<td>12</td>
<td>See Course Schedule</td>
</tr>
<tr>
<td>Labs (7)</td>
<td>12</td>
<td>See Course Schedule</td>
</tr>
<tr>
<td>Projects (7)</td>
<td>18</td>
<td>See Course Schedule</td>
</tr>
<tr>
<td><strong>Total Weight</strong></td>
<td>100</td>
<td></td>
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</tbody>
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To calculate your current Total Weight, use the following worksheet:

- **Actual Scores**
- **Running Total of Actual Scores**
- **Maximum Points per Assignment**
- **Running Total of Maximum Points**

<table>
<thead>
<tr>
<th>Lab 1</th>
<th>Lab 2</th>
<th>Lab 3</th>
<th>Lab 4</th>
<th>Lab 5</th>
<th>Lab 6</th>
<th>Lab 7</th>
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<table>
<thead>
<tr>
<th>Project 1</th>
<th>Project 2</th>
<th>Project 3</th>
<th>Project 4</th>
<th>Project 5</th>
<th>Project 6</th>
<th>Project 7</th>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Quiz 1</th>
<th>Quiz 2</th>
<th>Quiz 3</th>
<th>Quiz 4</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</table>

<p>| <strong>L</strong> = RAS/RMP |
| <strong>P</strong> = RAS/RMP |
| <strong>Q</strong> = RAS/RMP |</p>
<table>
<thead>
<tr>
<th>Section Percentage</th>
<th>Actual Scores (AS)</th>
<th>Running Total of Actual Scores (RAS)</th>
<th>Maximum Points per Assignment (MP)</th>
<th>Running Total of Maximum Points (RMP)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Midterm 1</td>
<td></td>
<td>0.867</td>
<td></td>
<td>0.867</td>
</tr>
<tr>
<td>Midterm 2</td>
<td></td>
<td>0.867</td>
<td></td>
<td>0.867</td>
</tr>
<tr>
<td>Final</td>
<td></td>
<td>0.867</td>
<td></td>
<td>0.867</td>
</tr>
</tbody>
</table>

Scratch your two lowest quiz scores (only eight of them will count) from the AS column of the quiz row. If you remove these lowest scores, then remove their corresponding total points from the RAS column.

Calculate the Section Percentage for each row by dividing the appropriate column totals indicated by the equation in this column. For example, assuming that in the labs row we have the RAS column showing a total sum of 78 and the RMP column showing a total sum of 90, then to calculate the L Section Percentage, we have

\[
L = \frac{\text{RAS}}{\text{RMP}} = \frac{78}{90} = 0.867
\]

Plug the results in the last column into the expression below and solve for TotalWeight.

\[
\text{TotalWeight} = L \times 12 + P \times 18 + Q \times 12 + M1 \times 16 + M2 \times 16 + F \times 26
\]

You can also use the Grade Estimator. This tool is available from the course Web site.

Final grades are based on your TotalWeight with:

- A- cutoff at 90
- B- cutoff at 80
- C- cutoff at 70
- D cutoff at 60
- F is below 60

These cutoffs may be lowered, but they will not be raised.

Scores will be posted using the eGradebook system: [http://www.d.umn.edu/egradebook/](http://www.d.umn.edu/egradebook/).

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**Syllabus or Schedule Revision**

The instructor reserves the right to make changes to the course syllabus or schedule at any time. Revisions will be posted on the course Web site and announced during lecture.

**Course Material**

You are responsible for reading assigned textbook material and for obtaining any material covered in lecture, discussion, and lab, including:

- lecture notes.
- assignments and handouts.
- turning in projects and labs.

**Attendance**

If you are unable to attend a class meeting (lecture, lab, or discussion), it is your responsibility to obtain any notes, assignments, and extra copies of handouts from a fellow student.

If you must miss a class meeting where an assignment must be turned in, you should either:

- Turn in the assignment early
- Obtain and submit written confirmation of a University-sanctioned excused absence and prearrange a due date extension with the instructor (see the course excused absence policy below)

**Excused Absence**

Students are expected to attend all scheduled class meetings. It is the responsibility of students to plan their schedules to avoid excessive conflict with course requirements. However, there are legitimate and verifiable circumstances that lead to excused student absence from the classroom. University-sanctioned reasons for excusing an absence include: subpoenas, jury duty, military duty, religious observances, illness, bereavement for immediate family, and NCAA varsity intercollegiate athletics. For complete information, please see UMD’s Excused Absence Policy.

Due date extensions for course assignments and make-up examinations will only be granted for a University-sanctioned excused absence and with proof supplied in writing from a proper authority. The written proof can be supplied via email.
### Student Conduct Code

Appropriate classroom conduct promotes an environment of academic achievement and integrity. Disruptive classroom behavior that substantially or repeatedly interrupts either the instructor’s ability to teach, or student learning, is prohibited. Students are expected to adhere to Board of Regents policy: Student Conduct Code.

### Teaching & Learning

UMD is committed to providing a positive, safe, and inclusive place for all who study and work here. Instructors and students have a mutual responsibility to insure that the environment in all of these settings supports teaching and learning, is respectful of the rights and freedoms of all members, and promotes a civil and open exchange of ideas. This course will adhere to UMD’s Teaching & Learning Policy.

### Academic Integrity

All assignments in this course will involve individual work. Submissions that are overly similar could result in the involved individuals to called into the instructor’s office and possible plagiarism charges imposed. The repercussions resulting from these charges will vary on a per-case basis and may be turned over to the University as a charge of academic dishonesty.

Academic dishonesty tarnishes UMD’s reputation and discredits the accomplishments of students. Academic dishonesty is regarded as a serious offense by all members of the academic community. This course will adhere to UMD’s Student Academic integrity Policy.

### Assignments

#### Expectations

- Attend all lecture and lab sessions.
- Do your own work on all assignments.
- Do not ask or answer code related questions of your fellow students. When you and a fellow student work in this way it is likely that you’ll produce overly similar code and you increase the likelihood that you’ll get called in on a possible plagiarism violation.
- Start all programming-related assignments early so you have ample time to resolve any difficulties.
- NEVER place any of your work on a Web server. Even in a “secret” directory.
- You should expect to put 15 hours per week (on average) into this course [3 hours of your time for each credit hour]. This includes attending three hours of lecture and two hours of lab/discussion each week. So, you should expect to spend 10 hours per week working on course-related material outside of the formally scheduled course time.

#### Help

If you need help with a project, start with:
1. course materials, such as text, notes, and previous assignments.
2. the TA on duty in HH 314 or MWAH 177.
3. your own TA during their office hours.
4. a tutor at the UMD Tutoring Center Library 2nd floor.
5. the instructor during office hours.

When emailing for assistance with a problem, you must follow the course email policy. Be sure to include ALL of your source code in your email (attachments work well), if you have a programming related question.

#### Submissions

Hard copy (paper) source code files and output of projects and some labs are required to be turned in.

- Hard copy submission can be made (in order of preference):
  1. to your teaching assistant at the beginning of your discussion or lab session on the due date.
  2. in your lab section’s drop box in MWAH 177 before due date.
  3. to your instructor before or after lecture before due date.

#### Late Work

Late work will be will be handled in the following manner: Assignments

- turned in at beginning of class session on the due date—full credit.
- turned in any later time on the due date or the next day—25% deduction.
- after one day late—zero points.

Word of wisdom: Start programming your solution to an assignment early.

The instructor’s consent is mandatory for extensions to assignment due dates. Do NOT approach your teaching assistant to obtain a due date extension.

#### Assignment Points

In order to earn points, each assignment must exceed a threshold of 40% of available points.

### Students with Disabilities

It is the policy and practice of the University of Minnesota Duluth to create inclusive learning environments for all students, including students with disabilities. If there are aspects of this course that result in barriers to your inclusion or your ability to meet course requirements—such as time limited exams, inaccessible Web content, or the use of non-captioned videos—please notify the instructor as soon as possible. You are also encouraged to contact the Office of Disability Resources (DR) to discuss and arrange reasonable accommodations. Please call 218–726–6130 or visit the DR Website at https://www.d.umn.edu/disability-resources for more information.