Course Syllabus - CS 202
Spring 2016

1. Course: CS 202 - Computer Science II

2. Catalog Description:
   • Emphasis on problem solving and program development techniques. Typical numerical and non-numerical problems are examined. Design, implementation, and abstraction principles of elementary data structures.

3. Course Objectives:
   • Present the foundation for Object Oriented Design. Using the C++ programming language as the tool, Function and Operator Overloading will be covered and Templates will be introduced. The use of Pointers and Dynamic Memory will be covered leading to the introduction of Lists (array based and dynamically allocated linked lists), as well as coverage of other elementary data structures such as Stacks and Queues (array based and linked list based). Coverage of basic algorithms to operate on these elementary data structures, including Recursion, will be covered.

4. ABET Accreditation Criterion 3 Program Outcomes:
   • An ability to apply knowledge of computing, mathematics, science, and engineering.
   • An ability to design and conduct experiments, as well as to analyze and interpret data.
   • An ability to design, implement, and evaluate a computer-based system, process, component, or program to meet desired needs, within realistic constraints specific to the field.
   • An ability to use current techniques, skills, and tools necessary for computing and engineering practice.
   • An ability to apply design and development principles in the construction of software systems or computer systems of varying complexity.

5. Course Prerequisite:
   • (CS 135) Computer Science I
   • Note: You must have at least a C in CS I (C- and below does not count.)
6. Prerequisites by Topic:
   • Basic Program Design, including the usage of the proper control structures for selection and iteration. An understanding of, and the ability to use functions, including prototypes and definitions, along with parameter passing. Declaration and usage of single and multidimensional arrays, including the passing of them as parameters to functions. Basic Stream I/O, including the usage of external files.

7. Course Outline:
   • The following is not necessarily intended as a sequential ordering.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Lectures</th>
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</thead>
<tbody>
<tr>
<td>C++ I/O</td>
<td>2</td>
</tr>
<tr>
<td>Function Prototypes &amp; Reference Parameters</td>
<td>2</td>
</tr>
<tr>
<td>Pointers &amp; Dynamic Memory</td>
<td>4</td>
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<tr>
<td>C-Strings</td>
<td>2</td>
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<tr>
<td>Structs</td>
<td>1</td>
</tr>
<tr>
<td>Classes</td>
<td>5</td>
</tr>
<tr>
<td>Linked Lists</td>
<td>4</td>
</tr>
<tr>
<td>Stacks and Queues</td>
<td>3</td>
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<tr>
<td>Recursion</td>
<td>2</td>
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<tr>
<td>Inheritance</td>
<td>2</td>
</tr>
<tr>
<td>Midterm</td>
<td>1</td>
</tr>
<tr>
<td>Final Exam</td>
<td>1</td>
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8. Text:
   • There is no required text for this course. You may use a C++ text as a supplement to the lecture. All eBooks through the University Libraries can be found at the following link: eBooks

9. Term Specific Information:
   • Instructor: Nancy LaTourrette
   • Office: SEM 240, 784-4014
   • email: latour@cse.unr.edu
   • Office Hours: M noon-3:00 pm; and by appointment
   • Class Hours: 1:00 - 2:15, TR – MIKC 124, R (Labs) – SEM 321
   • Teaching Assistants:
     o Prasun Dey, Eric Klukovich, Tuan Le, Cameron Rowe
       ▪ email: prasun@, eklukovich@, tuandzung.le@, crowe@ [nevada.unr.edu]
       ▪ Office Hours: Discussion Board – Wednesday noon-8:00pm; and by appointment
• SI Leader:
  o Joshua Volkmar
    ▪ email: jvolkmar@nevada.unr.edu
    ▪ SI Room: SEM 321
    ▪ SI Hours: M 7:00 – 9:00 pm; T 5:30 – 7:30 pm

10. Labs and Assignments:
    • The lab assignments require the solutions to problems using the computer. We will be using the Linux boxes in the College of Engineering Computing Center (SEM 321). You will be instructed how to submit your lab assignments for grading.
    • Late labs will incur strict penalties.
    • All formal homework assignments (including exercises and projects) and all exams (quizzes, midterm and the final exam) are to be treated as individual and not collective efforts.
    • The lab assignments should be considered as "open-book, take-home tests". If you need assistance with such an assignment, you may consult your professor, the CS 202 TAs, the CS 202 SI Leader, or a textbook. You may not receive substantive assistance in any form from any other source (i.e., from another student, from computer center personnel, from paid or unpaid tutors, etc.). Any assistance you receive is to be documented in the comment section of your code.
    • The only help you may receive from another student is with syntax errors or with questions regarding the computer system. Stealing another person's listing or having another person "ghost write" a lab will be considered cheating.

11. Academic Standards
    • You should carefully read the section on UNR Academic Standards found on-line. Your continued enrollment in this course implies that you have read it, and that you subscribe to the principles stated therein.
    • In addition to the stated University standards, any assignment found to have more in common with another source (e.g., work of other students, online or published material, etc.) than is determined to be reasonable or acceptable by the course instructor will be considered to be academic dishonesty.
    • Per the University policy, the definition of academic dishonesty also applies to person(s) who provided the material(s) in question.
    • When a student has demonstrated academic dishonesty, the policy of the Computer Science and Engineering Department is to apply the following minimum academic penalty of: 1) failure of the assignment with assigned grade of zero, and 2) a formal letter specifying the academic integrity breach and the associated sanction forwarded to
the Office of Student Conduct to be placed in the student’s permanent file.
• Depending on the egregiousness of the activity and for repeat offenders, sanctions beyond these minimums may be imposed at the discretion of the Instructor.

12. Assessment and Grading Scheme:
• There will be one midterm exam and a comprehensive final exam. All exams will take place in the regular classroom.
• There may be announced and unannounced quizzes and assignments during the lab hour.
• Most every week there will be a programming project. Assignments will be turned in through WebCampus. The lab instructor will provide details. Labs turned in after their due date and time will be graded as late. The penalty for late labs will be 20%. No labs will be accepted 24 hours after the assigned deadline.
• Not all assignments will allow late submission. Exceptions will be noted.
• The final grade will be based on (tentative):

<table>
<thead>
<tr>
<th>Component</th>
<th>Percentage</th>
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<tbody>
<tr>
<td>Weekly Projects &amp; Assignments</td>
<td>50%</td>
</tr>
<tr>
<td>Midterm Exam</td>
<td>20%</td>
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<tr>
<td>Final Exam</td>
<td>30%</td>
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</tbody>
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<table>
<thead>
<tr>
<th>Average</th>
<th>Grade</th>
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<tbody>
<tr>
<td>90% and above</td>
<td>A</td>
</tr>
<tr>
<td>80-89%</td>
<td>B</td>
</tr>
<tr>
<td>70-79%</td>
<td>C</td>
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<tr>
<td>60-69%</td>
<td>D</td>
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<tr>
<td>59% and below</td>
<td>F</td>
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• Note: You cannot earn a passing grade in the course without a passing grade on both the final exam and the average of the projects. Plus or minus may be assigned based on an outstanding or inferior final exam.

13. Disability Statement:
• If you have a disability for which you will need to request accommodations, please contact your instructor or the Disability Resource Center (Thompson Student Services - 107), as soon as possible.

14. Recording & Videotaping:
• Surreptitious or covert videotaping of class or unauthorized audio recording of class is prohibited by law and by Board of Regents policy.
This class may be videotaped or audio recorded only with the written permission of the instructor. In order to accommodate students with disabilities, some students may have been given permission to record class lectures and discussions. Therefore, students should understand that their comments during class might be recorded.

15. Academic Success Services:
   • Your student fees cover usage of the Math Center (784-4433 or www.unr.edu/mathcenter/), Tutoring Center (784-6801 or www.unr.edu/tutoring/), and University Writing Center (784-6030 or http://www.unr.edu/writing_center/). These centers support your classroom learning; it is your responsibility to take advantage of their services. Keep in mind that seeking help outside of class is the sign of a responsible and successful student.

16. Important Dates:
   • Midterm Exam -- TBA.
   • Final Exam -- Tuesday, May 10th, 5:00 - 7:00 pm.

17. Class Policies:
   • There are a number of class policies that should be read carefully and understood. These include, but are not limited to, late policies and grading challenges. You may find class policies under the 'Policies' tab on the course webCampus page.