Course Syllabus - CS 763
Spring 2015

1. Course Information:
   - **CS 763 - Computability & Formal Languages**
   - Instructor: Nancy LaTourrette
   - Office: SEM 240, 784-4014
   - email: latour@cse.unr.edu
   - Office Hours: M noon-2:00 pm; TTh 2:30 - 3:30 pm; and by appointment
   - Class Hours: Tuesdays 4:00 – 6:30 pm, AGN – SEM 201

2. Catalog Description:
   - Turing machines, recursive functions, computability and undecidability. Formal languages and their decision problems.

3. Prerequisites:
   - Prerequisite: CS 302 - Data Structures with a "C" or better. Students who have not taken CS 456/656 - Automata & Formal Languages should contact the instructor as soon as possible.

4. Objectives:
   - This course is intended to be an upper level graduate course in computer science theory. The object is to build upon the foundations laid down in CS 456/656. Theorems and proofs are essential to the course and will be used to learn computability and complexity theory in depth.

5. Course Outcomes:
   - An ability to apply engineering or computer science research and theory to advance the art, science and practice of the discipline
   - An ability to design and conduct experiments as well as to analyze, interpret, apply and disseminate the data
   - An understanding of research methodology

6. Course Outline:
   - The course will cover: decidable languages and the Halting Problem; reducibility; P and N classes; and NP-completeness. The six basic NP-Complete problems will be covered in detail.

7. Texts:
   - *Introduction to the Theory of Computation* by Michael Sipser -- Course Technology
8. Assessment and Grading Scheme:
• Assignments will be the reading, writing, and discussion of computability and complexity theory concepts and proofs.
• Students will be assigned leadership of proofs and discussions on a rotating basis.
• There will be a final project writing assignment.
• The final grade will be based on (Tentative, subject to change):

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<tbody>
<tr>
<td>Topic Leader</td>
<td>40</td>
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<tr>
<td>Participation</td>
<td>30</td>
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<tr>
<td>Final Project</td>
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Note: Plus and minus grades may be assigned.

9. Disability Statement:
• If you have a disability for which you will need to request accommodations, please contact me or someone at the Disability Resource Center (Thompson Building - Suite 101), as soon as possible.

10. Videotaping & Recording:
• Surreptitious or covert video-taping 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 may be recorded.