Text: C. Adams: The Knot Book.

Course Overview: The purpose of this course is to learn the basics of knot theory. We will learn about some of the difficulties of knots and how to formalize some of these questions so we can use math to help in understanding them. Some topics we may discuss are Reidemeister moves, mod-p colorings, knot determinants, knot polynomials, Seifert surfaces, Euler characteristic, knot complements, and knot groups. The course will be mostly self-contained and will have an emphasis on careful proof writing.

Homework: Homework will be assigned weekly. It will not be pledged. Feel free to work together on homework assignments, but write up your own solutions. Homework assignments will be given in class. Each assignment will be graded for correctness, clarity, and justification. Computations should be explained clearly and proofs should be rigorous.

Open Problems: After we get a few weeks in the semester we will begin student presentations of open problems. In groups of two, you will each find an open question about knot theory, you will be expected to present this question to the class explaining the question and why it might be interesting.

Exams: There will be one test in the middle of the semester. There is a final exam whose time will be scheduled by the registrar. If you have a legitimate schedule conflict with the midterm exam let me know as early as possible, so we can try to make arrangements. You will be responsible for any material we cover in class.

Grades: Your homework will count as 25% of your final grade, your open problem presentation will count 5%. The first test will count as 30% of your grade and the final exam counts 40%.
Concerning the final: It is the policy of the mathematics department that no final may be given early to accommodate student travel plans. We will not know when the final in this course will be scheduled for some time. Therefore, if you should make plans to travel before the end of final exam period, and it turns out that the final for this course is after your scheduled departure date, you will have to choose between keeping your plans and receiving a zero for the final, or incurring the costs for changing your plans and taking the final at its scheduled time. Thanks for your understanding.

Attendance: Students are expected to attend every class. It is the students responsibility to keep informed of any announcements, syllabus adjustments, or policy changes made during scheduled classes.

Disability Support: It is the policy of Rice University, as well as this instructor, that any student with a disability receive fair and equal treatment in this course. If you have a documented disability that requires academic adjustments or accommodations, please speak with me during the first two weeks of class. All discussions will remain confidential. Students with disabilities will also need to contact Disability Support Services in the Ley Student Center.