

**Math 263 Course Syllabus  
Sandhills Community College  
Department of Mathematics**

Course:	MAT 263 Brief Calculus
Credit Hours:	3
Lecture Hours:	3 per week
Lab Hours:	0 per week
Prerequisite:	MAT 171 with a grade of C or higher
Corequisite:	None
Course Description:	<p>This course introduces concepts of differentiation and integration and their applications to solving problems:the course is designed for students needing one semester of calculus.</p> <p>Topics include functions, graphing, differentiation, and integration with emphasis on applications drawn from business, economics, and biological and behavioral sciences. Upon completion, students should be able to demonstrate an understanding of the use of basic calculus and technology to solve problems and to analyze and communicate results. <b>This course has been approved to satisfy the Comprehensive Articulation Agreement general education core requirement in natural sciences/mathematics.</b></p>
Text: (Subject to change)	<b><u>Calculus and Its Applications</u></b> 8th edition, by Marvin L. Bittinger, Addison, Wesley, Pearson Publishers, 2004, ISBN: 0-321-16639-6.
Goals and Objectives:	<p>The student should be able to model and solve application problems, using technology, when appropriate, while learning to:</p> <ol style="list-style-type: none"> <li>1. Find limits numerically, graphically, and algebraically.</li> <li>2. Find derivatives using limits of difference quotients.</li> <li>3. Find derivatives using derivative formulas.</li> <li>4. Find instantaneous rates of change by using derivatives.</li> <li>5. Find higher order derivatives.</li> <li>6. Solve maximum and minimum problems.</li> <li>7. Sketch graphs using derivatives to find relative maxima and minima and points of inflection.</li> <li>8. Use exponential and logarithmic functions to solve problems involving growth and decay.</li> <li>9. Find indefinite and definite integrals.</li> <li>10. Find areas.</li> <li>11. Solve business and economic problems with integrals.</li> </ol>
General Education:	Students who are successful in this course will improve in the following general education areas: reading, oral communication, mathematical skills, problem solving, critical thinking, and cooperating with others.

Course Requirements:	A graphing calculator (preferably a TI-83+) is required in addition to the text.
Grading Scale:	Grading scale: 92 - 100 = A 84 - 91 = B 76 - 83 = C 70 - 75 = D Below 70 = F