

MATH 141 (§§005 & 006) – Calculus I

**Instructor** Professor Doug Meade  
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**Graduate Assistant** James Sweeney  
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**Supplemental Instructor** Jocelyn Mackay  
Sessions: Su 6:00-7:00, T 9:00 – 10:00, and R 8:00 – 9:00  
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**WWW URL** <http://www.math.sc.edu/~meade/math141-F13/>

<b>Meeting Times</b>	Lecture	MWF	10:50AM–11:40AM	LC 412
	Lab (§005)	T	8:30AM– 9:20AM	LC 303A
	Lab (§006)	T	10:05AM–10:55AM	LC 303A
	Recitation (§005)	Th	8:30AM– 9:20AM	LC 115
	Recitation (§006)	Th	10:05AM–10:55AM	LC 115

**Text** Stewart, *Calculus, Early Transcendentals*, Sixth Edition, Cengage Learning, 2008.

**Prerequisite** Placement score of 17-33 on Precalculus version of the Mathematics Placement Test or a grade of C or better in MATH 112, 115, or 116.

**Overview** This is the first course in the traditional three-semester calculus sequence. Learning calculus involves a certain amount of formulae, methods, and techniques. It is equally important that you obtain a fundamental understanding of three key concepts: *limits*, *differentiation*, and *integration*. The lectures, recitations, and lab sessions are designed to help develop your understanding of these concepts.

You should also be working to become an independent learner. You should not expect that every detail and nuance will be covered in the lectures, or recitations. The lectures are designed to introduce ideas and to provide you with a foundation from which to develop a more complete understanding (typically by completing the assigned homework exercises. You should work additional exercises, particularly on topics that you find difficult.

**Course Content** This course will cover most of the topics in Chapters 1–5 in the text. Specific topics to be covered include:

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|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Chapter 1:</b> Functions and Models <ul style="list-style-type: none"><li>• Introduction to Calculus</li><li>• Catalog of Essential Functions</li></ul>                                                             | <b>Chapter 4:</b> Applications of Differentiation <ul style="list-style-type: none"><li>• Optimization and Curve Sketching</li><li>• Mean Value Theorem</li><li>• Indeterminate Forms, l'Hôpital's Rule</li><li>• Antiderivatives</li></ul> |
| <b>Chapter 2:</b> Limits and Derivatives <ul style="list-style-type: none"><li>• Tangent and Velocity Problems</li><li>• Limit of a Function</li><li>• Continuity</li><li>• Derivatives, and Rates of Change</li></ul> | <b>Chapter 5:</b> Integrals <ul style="list-style-type: none"><li>• Area and Distance</li><li>• Definite and Indefinite Integrals</li><li>• Fundamental Theorems of Calculus</li><li>• Substitution Rule</li></ul>                          |
| <b>Chapter 3:</b> Derivative Rules <ul style="list-style-type: none"><li>• Product, Quotient and Chain Rules</li><li>• Implicit Differentiation</li><li>• Related Rates</li></ul>                                      |                                                                                                                                                                                                                                             |

<b>Grading</b>	<p>Your grade in this course will be based on your performance on homework, four (4) mid-term exams, the computer lab, and a final exam. The weights assigned to each of these components will be:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>Homework</td> <td>10%</td> <td>Quizzes</td> <td>10%</td> <td>Mid-term exams (3)</td> <td>45%</td> </tr> <tr> <td>Computer Lab</td> <td>15%</td> <td>Final exam</td> <td>20%</td> <td></td> <td></td> </tr> </table> <p>Course grades will be determined according to the following scale:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>A</td> <td>90 –100</td> <td>B</td> <td>80 –89</td> <td>C</td> <td>70 –79</td> <td>D</td> <td>60 –69</td> <td>F</td> <td>0 –59</td> </tr> </table> <p>The deadline to drop this course with a grade of W is Friday, <u>October 11, 2013</u>.</p>	Homework	10%	Quizzes	10%	Mid-term exams (3)	45%	Computer Lab	15%	Final exam	20%			A	90 –100	B	80 –89	C	70 –79	D	60 –69	F	0 –59
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<b>Exams</b>	<p>The lowest of your four (4) mid-semester exam scores will not be used in determining your overall grade. <i>Tentative</i> dates and material for these exams are:</p> <table border="0" style="margin-left: 40px;"> <tr> <td>Friday, September 13</td> <td>Chapters 1 and 2</td> </tr> <tr> <td>Monday, September 30</td> <td>Chapter 3</td> </tr> <tr> <td>Monday, October 21</td> <td>Chapter 4</td> </tr> <tr> <td>Monday, November 25</td> <td>Chapter 5</td> </tr> </table> <p>Make-up exams will be given only for documented reasons of illness, family emergency or participation in a University sponsored event. Excuses such as oversleeping, forgetting the time or location of the exam, and lack of studying are explicitly noted as unacceptable grounds for the administration of a make-up exam.</p> <p>A comprehensive final will be given at <u>9:00A.M. on Wednesday, December 11, 2013</u>.</p>	Friday, September 13	Chapters 1 and 2	Monday, September 30	Chapter 3	Monday, October 21	Chapter 4	Monday, November 25	Chapter 5														
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<b>Homework</b>	<p>Homework will be assigned, and graded, through WebAssign (<a href="http://www.webassign.net/">http://www.webassign.net/</a>). The class keys for WebAssign are</p> <table border="0" style="margin-left: 40px;"> <tr> <td>§005</td> <td>sc 4998</td> <td>1812</td> <td>§006</td> <td>sc 3462</td> <td>6480</td> </tr> </table> <p>You are responsible for completing all assigned work on time. It is a good idea to print copies of your work. Please report any difficulties that you have with this system as soon as possible. Some, but not all, of the assigned problems may be discussed in class or recitation.</p>	§005	sc 4998	1812	§006	sc 3462	6480																
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<b>Quizzes</b>	<p>There will be a quiz in most recitations (on Thursdays). Each quiz will consist of one or two problems similar in nature to the homework problems. Your quiz grade will be computed by your ten (10) highest quiz scores. <i>No make-up quizzes will be permitted.</i></p>																						
<b>Computer Labs</b>	<p>The weekly computer labs will complement the material presented in the lectures. Instruction in the use of Maple, a computer algebra system, will be provided. Many of the labs involve visualization, including animations, of applications of limits, derivatives, and integrals. If you want to use the computers in LC 303A and the door is locked, the combination is 4351. The lab homepage is <a href="http://www.math.sc.edu/calclab/141L-F13/">http://www.math.sc.edu/calclab/141L-F13/</a> .</p>																						
<b>Study Hints</b>	<p>Reading each section <b>in advance</b> of the lecture is strongly encouraged. Benefits of this preparation include obtaining a familiarity with the terminology and concepts to be encountered (so you can distinguish major points from side issues), being able to formulate questions about the parts of the presentation that you do not understand, and having a chance to review the skills and techniques that will be needed to apply the new concepts.</p> <p>Take advantage of the Supplemental Instruction. Many students find this exactly what they need to succeed — or to do better — in this course. Experience shows that improvements increase as the number of times you attend increases.</p> <p>The Maplets for Calculus (<a href="http://m4c.math.sc.edu/">http://m4c.math.sc.edu/</a>) are a collection of applets designed to help you learn and practice specific calculus skills. You will need to use your USC Network username and password to gain access to this site.</p> <p>For additional assistance, do not forget about the Math Tutoring Center. The Math Lab provides free assistance for all 100-level mathematics courses. The main location is LC 103, with tutors also available in the ACE locations in Bates House, Columbia Hall, and Sims. For updated hours and locations, visit the Math Lab homepage at <a href="http://www.math.sc.edu/mathlab.html">http://www.math.sc.edu/mathlab.html</a>. Also utilize the office hours of your TA, and your professor — we are all here to help you succeed in this course.</p> <p>Please discuss with me any difficulties that you are having with the course. Early resolution of weaknesses is the best way to prevent them from becoming major deficiencies that affect your performance in the course.</p>																						
<b>Attendance</b>	<p>Attendance at every class meeting is important – and expected. Students missing more than 10% of the class meetings (4 days) can have their grade lowered.</p>																						
<b>Academic Honesty</b>	<p>Cheating and plagiarism will not be tolerated. You may discuss homework problems with others, but do not copy work from another student or from a book. Violations of this policy will be dealt with according to University guidelines.</p>																						