

R. Reimer

# MATH 1210 CALCULUS I

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467-1153

Class: NIB 133  
CRN 22034

Spring 2010  
Th 5:15–6:45

Office Hours  
M and Th: 6:45–7:30

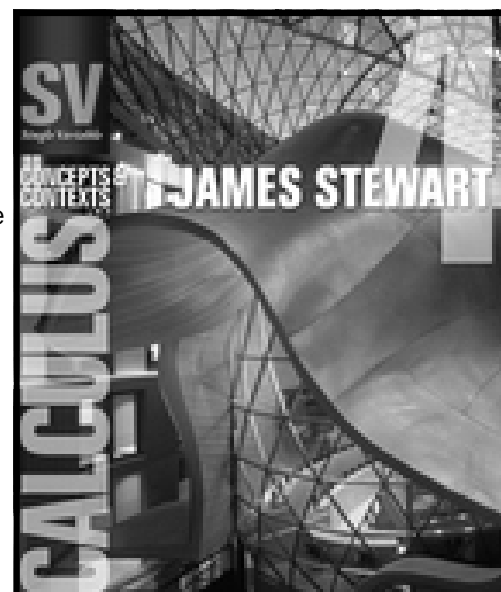
Upon successful completion of Math 1210, a student will demonstrate through testing the ability to:

- Define and evaluate limits.
- Define and identify continuity and differentiability.
- Apply limits to graphing techniques.
- Define the derivative.
- Use formulas for differentiation.
- Use the derivative to find tangents to curves.
- Apply the derivative in problems involving extrema, and related rates.
- Define the definite integral.
- Apply both parts of the Fundamental Theorem of Calculus.
- Evaluate the definite integral and use it in applications.
- Use the definite integral to find areas between curves, and volumes of solids of revolution.
- Use L'hospital's Rule to evaluate limits.
- Perform integrations by various techniques (pans, substitution, partial fractions)
- Perform numerical integration.

## DESCRIPTION

Designed for students intending to earn an Associate of Science degree and then transfer to a mathematics, engineering program, or other calculus-based major at a four-year institution. Students will gain a basic understanding of calculus, the mathematics of motion and change. Topics include limits and continuity, differentiation, applications of differentiation, integration, applications of integration, derivatives of exponential functions, logarithmic functions, inverse trigonometric functions, hyperbolic functions and related integrals. Students must have a working knowledge of college algebra and trigonometry. A graphing calculator is strongly recommended. Course includes lecture and homework assignments, quizzes, tests, and a final comprehensive exam. Successful completion of the course prepares students for Calculus II. Satisfies prerequisites for MATH 1220 and PHSX 2210. **Prerequisite:** MATH 1050 and MATH 1060 or Math

ometry. A graphing calculator is strongly recommended. Course includes lecture and homework assignments, quizzes, tests, and a final comprehensive exam. Successful completion of the course prepares students for Calculus II. Satisfies prerequisites for MATH 1220 and PHSX 2210. **Prerequisite:** MATH 1050 and MATH 1060 or Math



1065 (with an earned grade of C or better) or ACT score of 26 or higher. 5 lecture hours per week.

### ALL MATHEMATICS CLASSES AT DIXIE COLLEGE WILL:

- 1) Require students to perform mathematical processes including arithmetical, algebraic, and proportions/ratios, algebraic equations and/or calculus techniques.
- 2) Provide students with application problems that use a variety of methods including arithmetical, algebraic, and geometric methods.
- 3) Challenge students to make inferences from mathematical processes including fractions, percentages, proportions/ratios, algebraic, equations and/or calculus techniques.
- 4) Provide students with application problems that use a variety of Mathematical functions.

**REQUIRED TEXT:** James Stewart (2010), *Calculus: Concepts & Contexts* (4th ed.).

**CALCULATORS:** A scientific calculator is required. You are not allowed to share calculators during tests or quizzes. The model TI-83 Plus will be used in class.

**IMPORTANT DATES:**

Please see <http://new.dixie.edu/reg/?page=spring2010> for important dates.

R. Reimer

**DISABILITIES:** If you are a student with a physical or mental impairment and would like to request accommodations, please contact the Disability Resource Center (652-7516) in Room 201 of the Student Services Center. The Disability Resource Center will determine your eligibility for services based upon complete professional documentation. If you are deemed eligible, the Disability Resource Center will further evaluate the effectiveness of your accommodation requests and will authorize reasonable accommodations that are appropriate for your disability.

**D-MAIL:** Important class and college information will be sent to your Dmail email account. This information includes your DSC bill, financial aid/scholarship notices, and notification of dropped classes, reminders of important dates and events, and other information critical to your success in this class and at DSC. All DSC students are automatically assigned a Dmail email account. If you don't know your user name and password, go to [www.dixie.edu](http://www.dixie.edu) and select "Dmail," for complete instructions. You will be held responsible for information sent to your Dmail email, so please check it often.

**CHEATING, COURTESY AND DISRUPTIVE BEHAVIOR:** Cheating and disruptive behavior will not be tolerated. DSC policy on Academic Dishonesty is explained on the website <http://www.dixie.edu/humanresources/policy/sec3/334.html>. Cell phones should be on vibrate and answered in the hall if necessary. Text messaging should be avoided during class.

# GRADING

During the semester, five 100 point exams will be given in class. The lowest exam score will be dropped. Therefore, except in unusual circumstances, exams may not be made up. The final exam is comprehensive and worth 150 points. Homework will be assigned each class period

and may be passed off in any of the two class periods following the assignment. After that, it may be passed off for 1/2 credit. Homework will be graded on completion – students should check their answers in the back of the text. Homework is worth 5 points per class period (15 points per week, 225 points total).  
500 (Tests) +  
150 (Final) +

225 (Homework) =  
875 Total Points

**Students are responsible to track their points and their grade.** The grading breakdown is as follows:

90-100% = A  
87-89% = B+ 83-86% = B  
80-82% = B- 75-79% = C+  
70-74% = C 65-69% = C-  
60-64% = D+ 55-59% = D  
50-54% = D- 0-50% = F

<b>JAN 11</b> <u>1.1</u> 1-11 odd,15,25-31odd,39,43,45,47,49,53,55	<b>12</b> <u>1.2</u> 3,5,9,17,19,20 <u>1.3</u> 1-7odd,13,21,29,31,40,41,43,51,53,63,64	<b>14</b> No Class
<b>18</b> No School	<b>19</b> <u>1.5</u> 1-4,7,11,19,21,24,29,31,35 <u>1.6</u> 3-11odd,21,25,35-41, 49,51	<b>21</b> <u>1.7</u> 1-19 odd,27,42
<b>25</b> Exam 1	<b>26</b> <u>2.1</u> 1-7 odd <u>2.2</u> 2,5,15,17,21,31	<b>28</b> <u>2.3</u> 3-23odd,27,29,31,37,38,49 <u>2.4</u> 3,15-18,27-35odd,41,43,51,55
<b>FEB 1</b> <u>2.5</u> 3,15-39odd,53 <u>2.6</u> 3-9odd,16-21,23-39odd	<b>2</b> <u>2.7</u> 3-9odd,14,19-29odd,41,42,43,45,47	<b>4</b> <u>2.8</u> 1-11odd,15,19,23,25,26,27,28,29,31
<b>8</b> Exam 2	<b>9</b> <u>3.1</u> 3-33odd,41,45,47-55,65,69,71	<b>11</b> <u>3.2</u> 1-31odd,41-47odd,51,53
<b>15</b> No School	<b>16</b> <u>3.3</u> 1-27odd,28,29,31,37,39,41,43,45,49	<b>18</b> Midterms <u>3.4</u> 1-43odd,49,51,55,61,65,67,79,81,86
<b>22</b> <u>3.5</u> 3-27odd,41,43	<b>23</b> <u>3.6</u> 1-9odd,17,19,21,37,39	<b>25</b> <u>3.7</u> 3-23odd,33-43odd,47
<b>MAR 1</b> <u>3.8</u> 15,20,29,30,31	<b>2</b> <u>3.9</u> 5,7,9,25,29	<b>4</b> Exam 3
<b>8</b> No School	<b>9</b> No School	<b>11</b> No School
<b>15</b> <u>4.1</u> 1-15odd,20,22,26,29,30	<b>16</b> <u>4.2</u> 1,3,5,23-43odd,47,53,57	<b>18</b> <u>4.3</u> 6,7-15odd,21-33odd,59,63,65
<b>22</b> <u>4.5</u> 1-45odd	<b>23</b> <u>4.6</u> 3,5,9,11,12,14,15,23,25,26,38,57	<b>25</b> <u>4.7</u> 5,11,17,19,21
<b>29</b> <u>4.8</u> 1-35odd,41,43,49	<b>30</b> Review	<b>1</b> Exam 4
<b>APR 5</b> <u>5.1</u> 3,5,17,21	<b>6</b> <u>5.2</u> 17,19,21,23,25,31-43odd,51	<b>8</b> <u>5.3</u> 1-31odd,43-49odd,59,61
<b>12</b> <u>5.4</u> 3,7-17odd,21,23	<b>13</b> <u>5.5</u> 1-61odd	<b>15</b> <u>5.6</u> 1-29odd
<b>19</b> <u>5.7</u> 1-13odd,21,29,31	<b>20</b> <u>5.10</u> 1-33odd,43,51,61	<b>22</b> Exam 5
<b>26</b> Final Exam Review	<b>27</b> Final Exam Review	<b>29</b> Last Day of Classes Final Exam Review
<b>MAY 3</b> No Class	<b>4</b> FINAL EXAM 5:15 p.m.	