

Math 2144, Calculus I, Syllabus

Section 004: 11:30 MTWF, AGH 361

Instructor: Dr. Jim Choike, Professor of Mathematics
Office: MS 416 **Phone:** 744-5783
Email: choike@math.okstate.edu

Office Hours: By appointment

Prerequisites: High School Algebra I, Geometry, Algebra II, and Trigonometry
Also, refer to *Mathematical Background for Calculus* handout

Textbooks: *Calculus: Early Transcendentals* 6e by James Stewart

Cell Phones: Cell phones MUST be turned off and OUT-OF-VIEW during class. Cell phones cannot be used during class for any purpose; this includes, but is not restricted to, making or receiving phone calls, making or receiving text messages, taking photographs during class, or using a cell phone for calculations.

Exams: There will be three one-hour in-class exams given on the following (tentative) dates:

Exam I Monday, February 6; Chapters 1, 2, and 3.1
Exam II Friday, March 9; Chapters 3 and 4.1 and 4.2
Exam III Friday, April 13; Chapters 4 and 5

Comprehensive Final Exam

The Final Exam will be a comprehensive exam over all material covered in the course. The Final Exam will be a 100-point Exam.

Final Exam:

Date: Monday, April 30, 2012 **Time:** 10:00 - 11:50 AM **Place:** AGH 361

THERE WILL BE NO MAKE-UP EXAMS.

WebAssign Problems: Homework

WebAssign (WA) is an online system for submitting course homework. For information about WA, you can go to this link <http://www.math.okstate.edu/webassign> to obtain self-enrollment information and information about how to use WA to submit answers.

Each WA homework assignment will have a different point value. The total number of points available on WA is 708.4. The homework score H from WA will be a maximum of 100 points computed as follows: let A = your WA total of points, then $H = \min(100, 100 \cdot (A/650))$. The number H will be the final score for homework in the course.

CAUTION: High WA homework scores do not automatically translate into high in-class Exam scores. Students who use WA to learn mathematical ideas and to practice mathematical skills and problem solving are the ones who benefit most from WA, independent of their WA score.

WebAssign Class Key

The class key for Math 2144, Section 004 in WebAssign, our online homework system, is:

okstate 1624 1033.

Students should set up their account and self-enroll for access to our section during the first week of class at <https://www.webassign.net/login.html>.

In-Class Written Quizzes

There will be unannounced weekly quizzes over the homework problems assigned, from the text and from the WebAssign online system, and the material covered in class. At a minimum 12 - 15 quizzes will be given, each worth a maximum of 10 points. The ten highest scores will be used as the Quiz Score called Q .

THERE WILL BE NO MAKE-UP QUIZZES.

Final Grade for the Course

The final grade will be based on the semester score S and the final exam score F . The semester score S will be a weighted average of the average of the three Exam scores and the average of the Quiz score Q plus the Homework score H . Thus, if $E = \frac{E_1 + E_2 + E_3}{3}$ and $W = \frac{Q + H}{2}$, then the

semester score S will be computed as follows: $S = \frac{3}{4}E + \frac{1}{4}W$. The score on the final exam will

be denoted F . The grade for the course will be based on the number $G = \max\left(\frac{S + F}{2}, \frac{3S + F}{4}\right)$.

The final letter grade will be determined according to the grading scale:

Grading Scale

A: 90 – 100; B: 80 – 89; C: 70 – 79; D: 60 – 69; F: 0 – 59.

MLRC

The MLRC (Mathematics Learning Resource Center) is located on the 4th Floor of the Classroom Building, Room 420 CLB. The MLRC is a place where students can receive tutoring in Calculus I, use microcomputers to solve problems, and review topics of algebra, trig, and calculus using videotapes. The MLRC hours are:

MTTh: 12 NOON to 10:00 PM

W: 12:00 NOON to 6:00 PM

F: 12 NOON to 5:00 PM.

Important Dates

Monday, January 9: Class work begins

Tuesday, January 17: Last day to drop a course with no grade and no fees

Friday, January 20: Last day to drop a course with 50% fees and grade of "W"

Spring Break Week: March 19-23

Friday, April 6: Last day to drop or withdraw with an automatic grade of "W"

Friday, April 20: Last day to drop from a course with an assigned grade of "W" or "F."

Pre-Finals Week: April 23-27, 2012; **Finals Week:** April 30-May 4, 2012

MATH 2144 Calculus I Syllabus

Textbook: *Calculus Early Transcendentals 6e* by James Stewart.

1/9	M	Pre-calculus Review: Sect. 1.2, 1.3, 1.5, and 1.6
1/10	T	Introducing Calculus
1/11	W	Sect. 2.1: The Tangent and Velocity Problems
1/13	F	Sect. 2.1: Continued
1/16	M	MLK Day
1/17	T	Sect. 2.2: The Limit of Function
1/18	W	Sect. 2.2: Continued
1/20	F	Sect. 2.3: Calculating Limits Using the Limit Laws
1/23	M	Sect. 2.5: Continuity
1/24	T	Sect. 2.6: Infinite Limits
1/25	W	Sect. 2.6: Continued
1/27	F	Sect. 2.7: Derivatives and Rates of Change
1/30	M	Sect. 2.7: Continued
1/31	T	Sect. 2.8: The Derivative as a Function
2/1	W	Sect. 3.1: Differentiation: Polynomials and Exponentials
2/3	F	Review for Exam I
2/6	M	Exam 1: Chapters 1, 2, and 3.1
2/7	T	Sect. 3.2: Product and Quotient Rules
2/8	W	Sect. 3.2: Continued
2/10	F	Sect. 3.3: Derivatives of Trigonometric Functions
2/13	M	Sect. 3.4: The Chain Rule
2/14	T	Sect. 3.4: Continued
2/15	W	Sect. 3.5: Implicit Differentiation
2/17	F	Sect. 3.5: Continued
2/20	M	Sect. 3.6: Derivatives of Logs
2/21	T	Sect. 3.6: Continued
2/22	W	Sect. 3.8: Exponential Growth and Decay
2/24	F	Sect. 3.8: Continued
2/27	M	Sect. 3.9: Related Rates
2/28	T	Sect. 3.9: Continued
2/29	W	Sect. 3.10: Linear Approximations and Differentials
3/2	F	Sect. 3.10: Continued
3/5	M	Sect. 4.1: Maximum and Minimum Values
3/6	T	Sect. 4.2: The Mean Value Theorem
3/7	W	Review for Exam 2
3/9	F	Exam 2: Chapters 3 and 4.1, 4.2
3/12	M	Sect. 4.3: How Derivatives Affect the Shape of a Graph
3/13	T	Sect. 4.3: Continued
3/14	W	Sect. 4.4: L'Hopital's Rule
3/16	F	Sect. 4.4: Continued
Spring Break Week: March 19 - 23		
3/26	M	Sect. 4.7: Optimization Problems
3/27	T	Sect. 4.7: Continued
3/28	W	Sect. 4.9: Antiderivatives
3/30	F	Sect. 5.1: Areas and Distances
4/2	M	Sect. 5.1: Continued
4/3	T	Sect. 5.2: The Definite Integral
4/4	W	Sect. 5.2: Continued
4/6	F	Sect. 5.3: The Fundamental Theorem of Calculus
4/9	M	Sect. 5.3: Continued
4/10	T	Sect. 5.4: Indefinite Integrals and Net Change Theorem
4/11	W	Sect. 5.4: Continued
4/13	F	Exam 3: Chapters 4.3, 4.7, 4.9; 5.1-4
4/16	M	Sect. 5.5: The Substitution Rule
4/17	T	Sect. 6.1: Areas between Curves
4/18	W	Sect. 6.2: Volumes
4/20	F	Sect. 6.3: Volumes by Cylindrical Shells
PRE-FINALS WEEK		
4/23	M	Sect. 6.3: Continued
4/24	T	Sect. 6.5: Average Value of a Function
4/25	W	Sect. 7.7: Approximate Integration
4/27	F	Review for Final Exam

FINAL EXAM WEEK: 4/30 - 5/4

Homework Assignments for Calculus I

Math 2144.004, Spring 2012

From: *Calculus: Early Transcendentals* 6e by James Stewart

<p>Chapter 1</p> <p>Section 1.1: 1, 2, 10, 21, 23, 25, 27, 29, 56, 57</p> <p>Section 1.2: 3, 4, 5, 6, 8, 11, 14, 18</p> <p>Section 1.3: 3, 5, 31, 38, 42, 50, 51, 59, 62</p> <p>Section 1.5: 3, 13, 17, 19</p> <p>Section 1.6: 15, 17, 18, 22, 26, 33, 37, 38, 47, 48, 59, 66</p> <p>Chapter 2</p> <p>Section 2.1: 1, 3, 5, 7</p> <p>Section 2.2: 2, 3, 5, 7, 9, 13, 15, 19, 27</p> <p>Section 2.3: 1, 2, 7, 11, 13, 15, 21, 25</p> <p>Section 2.5: 3, 15, 17, 19, 23, 25, 29, 35, 37, 41</p> <p>Section 2.6: 3, 9, 11, 15, 19, 21, 23, 24, 25, 28</p> <p>Section 2.7: 3, 5, 11, 16, 17, 31, 36, 43, 48, 50</p> <p>Section 2.8: 1, 3, 5, 10, 21, 25, 41, 42, 43</p> <p>Chapter 3</p> <p>Section 3.1: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 23, 33, 49, 55, 60, 70</p> <p>Section 3.2: 1, 3, 5, 7, 11, 15, 21, 27, 29, 43, 47</p> <p>Section 3.3: 1, 3, 5, 7, 9, 13, 17, 19, 25, 29, 31, 33, 41, 43, 45</p> <p>Section 3.4: 1, 3, 5, 7, 9, 11, 13, 15, 17, 25, 39, 41, 53, 59, 63, 65</p> <p>Section 3.5: 1, 3, 5, 9, 12, 13, 15, 19, 23, 27, 29, 35, 45, 47</p> <p>Section 3.6: 3, 5, 7, 9, 11, 13, 15, 17, 23, 27, 37, 43, 45</p> <p>Section 3.8: 1, 3, 5, 7, 9, 13, 15</p> <p>Section 3.9: 1, 3, 5, 7, 9, 11, 13, 18, 20, 23</p> <p>Section 3.10: 1, 3, 5, 7, 9, 11, 13, 15, 17, 19, 21, 23, 25, 33, 40, 43</p>	<p>Chapter 4</p> <p>Section 4.1: 2, 3, 5, 11, 15, 17, 21, 23, 29, 31, 33, 37, 39, 43, 49, 51, 57</p> <p>Section 4.2: 3, 5, 7, 11, 13, 17, 23, 31</p> <p>Section 4.3: 2, 5, 6, 7, 8, 9, 11, 13, 15, 17, 19, 31, 32, 35, 39, 41, 43, 45, 53, 61</p> <p>Section 4.4: 5, 11, 13, 15, 19, 21, 25, 37, 49, 53, 55, 59, 61</p> <p>Section 4.7: 1, 2, 5, 7, 8, 9, 11, 13, 14, 15, 21, 30, 33</p> <p>Section 4.9: 1, 3, 5, 9, 11, 19, 21, 23, 25, 31, 37, 39, 49, 53, 57, 63</p> <p>Chapter 5</p> <p>Section 5.1: 1, 2, 3, 5, 11, 13, 16, 20</p> <p>Section 5.2: 1, 3, 5, 7, 9, 11, 17, 19, 29, 33, 34, 35, 37, 39, 47, 49</p> <p>Section 5.3: 2, 3, 4, 5, 7, 9, 11, 13, 15, 19, 21, 23, 25, 27, 29, 35, 43, 53, 55, 57, 63</p> <p>Section 5.4: 5, 7, 9, 11, 15, 17, 23, 29, 31, 33, 35, 43, 57, 59, 62</p> <p>Section 5.5: 1, 3, 5, 7, 9, 11, 19, 21, 23, 27, 31, 41, 43, 53, 61, 65, 73, 74, 77, 78</p> <p>Chapter 6</p> <p>Section 6.1: 1, 2, 3, 4, 5, 7, 11, 15, 21, 22, 23, 24, 31, 49</p> <p>Section 6.2: 1, 3, 5, 7, 9, 11, 17, 19, 21, 23, 31, 33</p> <p>Section 6.3: 2, 3, 5, 7, 9, 11, 13, 15, 17, 37, 39</p> <p>Section 6.5: 1, 3, 5, 7, 9, 11, 17, 19</p> <p>Section 7.7: 1, 3, 7, 9, 11, 13, 15, 19, 21, 30, 34</p>
---	--