

Math 262 Section 4503 MW 7:15-9:55 Fall 13 location MSA 105 (E-mail: feinerh@wlac.edu Math 262 in subject area.)

Professor: H. Feiner, office MSB219 MW 2:30:00 – 4:00 P.M. and TTh 9:30-10:30 A.M.(Phone 310-287-4543)

Text: Calculus (Stewart) (5th edition, Thompson) ISBN: 0-495-38362-8 **Rented**

Mode of Instruction: Lecture.

Requirements:

Welcome to Etudes -- a teaching, learning, and collaboration environment

Please review system requirements below:

1. [Computer \(PC and Mac\) and Connectivity Requirements](#)
2. Be sure you are using a supported browser. They are free downloads.
 - o PC Users: [Internet Explorer 7 SP2](#) or [Firefox 3](#). IE 8 is not yet supported. For more information, see: [PC Supported Browsers](#).
 - o Mac users: Download [Firefox 3](#). Mac users must be running OSX 10.3 or above. For more information, see: [Mac Supported Browsers](#).
3. Configure your browser's cache. 99% of problems are due to incorrect "cache" browser settings.
 - o [PC Browser CACHE Settings](#)
 - o [Macintosh Browser CACHE Settings](#)
4. Configure [cookies](#), [JavaScript](#), [pop-up blocker](#).
5. Accept Etudes-NG [SSL certificate and settings for alerts](#).

Other ISP & browser considerations:

6. [IMPORTANT note for AOL Users!](#) Do NOT use AOL's browser.
7. **Satellite ISP's are NOT recommended!** Users who are using **Direcway** or **Hughes Satellite ISP's** might encounter technology problems and intermittent issues with Etudes-NG that are beyond our control.
8. **Use of Multiple Browser Windows is a no-no!** Do NOT open more than one Etudes-NG browser window while being logged into the system. It is easy to log yourself out of one and get logged out of the others, losing what you were working on - assignments, tests, etc. You will be prompted to log back in!

Course Description:

Math 262, Basic College Mathematics, is delivered by Etudes on line. Students choose the course as a face-to-face course. Students must be registered with WLAC in Culver City, CA, and follow all rules, regulations, and deadlines. This includes the admonition that you must **withdraw officially before the deadline** in case you abandon the class. Failure to withdraw

will result in failure of the course. The last day to drop for this class with no fee owed is Tuesday, February 21, 2012. The last day to drop without a "W" is Friday, March 2, 2012. The last day to drop with a "W" is Friday, May 4, 2012

All students have an Etudes account to be used.

The second course of calculus deals with the differentiation and integration of transcendental functions, standard techniques of integration, curves in polar coordinates, and sequences and series.

Students stay in touch with the professor and each other through discussion and/or private messages on this website.

Warning:

Make your best effort in this course. Do homework regularly. You need to reach the point where you can do homework without help from any source. Form study groups.

Expected Outcomes:

Ability to handle inverse functions

- Competence in the techniques of integration.
- Aptitude for solving integration problems.
- Capability to solve elementary differential equations.
- Facility with parametric and polar equations.
- Competence in computing with sequences and series.

Course Format:

The course is delivered in small sections through modules.

Familiarize yourself with the material in the section presently covered in the textbook. Examine the supplementary notes in the Etudes module under discussion. Read the textbook section, work out the examples with pencil and paper. Rework the examples if necessary till you can reproduce them without help from any source. Now you are ready for the homework from the textbook. Do every other odd numbered problem, as many as needed.

- **You can go through suggested problems in the official textbook. The solutions are also in Etudes. Special lessons are in each section in PDF format.**

Take the tests when scheduled. Make-ups are given for extenuating circumstances. Show enough work on paper so that your reasoning can be followed without additional oral explanations and associate each piece of work with a problem number. Box in answers on paper.

Visit the restroom before the test. You will not be permitted to leave the room while you take a test, then return and continue testing. Turn off all music and other electronic devices during testing.

The date for taking the final is fixed by the college.

Communication with professor/students:

All communications online happens within the course site. Post your question(s) in the appropriate forum under Discussion & Private Messaging. There is no quota for messaging. Up to **5% extra credit** will be added to the students with the most pertinent messages (questions and answers). Extra credit for other student messages will be pro-rated.

Hints:

When answering test questions, budget your time. Ten problems solved in 50 minutes allows five minutes per question. Don't spend more time on the first go-around. Answer questions in order and show reasoning.

A grade is adjusted in case of clerical error (check additions, etc.)

Scoring and Evaluation:

Homework/quizzes (47 sections): (no points).

4 Tests: (11 chapters) 100 points per test.

Final: 300 points.

Extra credit: None

A: 90.1% - 100%

B: 80.1% - 90%

C: 70.1% - 80%

D: 60.1% - 70%

F: Below 60%

The grade of Incomplete will be issued only if the student is prevented from taking the final due to a **verifiable emergency before the final**. A student who is not passing the class or has personal issues affecting performance needs to withdraw before the withdrawal deadline.

Attendance:

You can be dropped from class if you **miss three class sessions**, but the ultimate responsibility for officially withdrawing is yours. The last day to drop for this class with no fee owed is Tuesday, February 21, 2012. The last day to drop without a "W" is Friday, March 2, 2012. The last day to drop with a "W" is Friday, May 4, 2012

Tentative schedule:

Week 1A: (7.1) Inverse Functions, (7.2) The Natural Logarithmic Function,

Week 1B: (7.3) The Natural Exponential Function (7.4) General Logarithmic and Exponential Functions.

Week 2A: (7.5) Exponential Growth and Decay., (7.6 Inverse Trigonometric Functions) Translating verbal expressions into variable expressions.

Week 2B: (.7.7 Hyperbolic Functions) Indeterminate Forms,

Week 3A: Review

Week 3B: Test 1

Week 4A: (8.1) Integration by Parts. (8.2) Trigonometric

Week 5A: Integrals (8.3) Trigonometric Substitutions.

Week 5B: (8.4) Integration of Rational Functions by Partial Fractions., (8.5) Strategy for Integration

Week 6A: (8.6) Skip. (8.7) Skip .

Week 6B: Test 2 ,

Week 7A: (9.1) Arc Length. (9.2) Area of a Surface of Revolution

Week 7B: . (9.3) Application to Physics and Engineering (9.4) Skip. (9.5) Probability.

Week 8A: . (10.1) Modeling and Differential Equations. (10.2) Directional Fields and Euler's Method.

Week 8B: (10.3) Separable Equations. (10.4) Models for Population Growth..

Week 9A: (10.5) Linear Equations. (10.6) Skip.Review

Week 9B: Test 2.

Week 10A: (11.1) Curves Defined by Parametric Equations. (11.2) Calculus with Parametric Curves

Week 10B: (11.3) Polar Coordinates. (11.4) Area and Length in Polar Coordinates.

Week 11A: (11.5) Conic Sections, (11.6) Conic Sections in Polar Coordinates.

Week 11B: Test 3.

Week 12A: (12.1) Sequences. (12.2) Series. (12.3) The Integral Test and Estimates of Sums.

Week 12B: (12.4) The Comparison Tests (12.5) Alternating Series

Week 13A: . (12.6) Absolute Convergence and the Ratio Test and Root Tests. (12.7) Strategies for Testing Series

Week 13B: (12.8) Power series. (12.9) Representation of Functions as Power Series .

Week 14A: (12.10) Taylor and MacLaurin Series. (12.11) Application of Taylor Series.

.Week 15A: Test 4

Week 15B: Review

Week 16A: Final ?.

Week 16B: Final ?

Conduct:

You are adults and will be treated accordingly. Likewise, you will behave accordingly. I will not tolerate any student or classroom situation that distracts from a positive learning environment. That includes eating/drinking in class (except for water) and talking. You could be suspended for one or two days by the professor. You could also be sent to the dean of Student Services for these and other violations for disciplinary action, including longer suspension and expulsion.

Board Rule 9803.17 Interference with Peace of College

The malicious or willful disturbance of the peace or quiet of any of the Los Angeles Community Colleges by loud or unusual noise or any threat, challenge to fight, or violation of any rules of conduct as set forth in this Article. Any person whose conduct violates this section shall be considered to have interfered with the peaceful conduct of the activities of the college where such acts are committed.

Dishonesty Policy:

Cheat once, get an F on the test. The incident will be reported to the vice president of student services. Cheat again, fail the course and get reported to vice president of student services.

Recording devices:

State law in California prohibits the use of any electronic listening or recording device in a classroom without prior consent of the instructor and college administration. Any student who needs to use electronic aids must secure the consent of the instructor. If the instructor agrees to the request, a notice of consent must be forwarded to the Vice President of Academic Affairs for approval.

Disciplinary action:

Violation of Board Rules shall result in student discipline imposed in accordance with the Student Discipline Procedures as stated in Board Rule 91101. Discipline includes warning, reprimand, disciplinary probation, suspension or termination of financial aid, suspension, withdrawal of consent to remain on campus, expulsion subject to reconsideration, and permanent expulsion.

Student grievance procedure:

The purpose of the student grievance procedure is to provide a prompt and equitable means of resolving student grievances. The procedure enumerated in Administrative Regulation E-55 shall be available to any student or applicant for admission who believes a college decision or action has adversely affected his or her status, rights, and/or privileges as a student. Education Code Section 76224(a) governs grievances relating to course grades.

Disabled students programs & services:

West Los Angeles College recognizes and welcomes its responsibility to provide an equal educational opportunity to all disabled individuals. The Office of Disabled Students Programs and Services (DSP&S) has been established to provide support services for all verified disabled students pursuing a college education. All services and equipment are provided free of charge to any qualifying disabled student. The DSP&S Office is located in the Heldman Learning Resources Center (HLRC), room 119. The Office is open Monday through Thursday, 9:00 a.m. to 5:30 p.m., and Friday, 9:00 a.m. to 12:00 p.m. Early morning and evening appointments can be made by special arrangement. The telephone number is (310) 287-4450. The following services are offered: Note taking assistance. • Classroom accommodations for students with disabilities.

- Registration assistance.
- Special parking permits.

- Academic and career guidance counseling.
- Adaptive equipment and technology aids.
- Specially adapted computers.
- Test proctoring and related accommodations.
- Instructor liaison.
- Learning strategies and study skills classes

The DSP&S Office also maintains a liaison with the California Department of Rehabilitation and other public agencies such as the Regional Center and Westside Center for Independent Living.

These guidelines may be changed to improve or further class atmosphere.

Tentative schedule:

M 8-26 Review 7.1-7.2*	W 8-28 7.3-7.4	M 9-02 Labor Day	W 9-04 7.5-7.6-
M 9-09 7.7-7.8	W 9-11 Test 1	M 9-16 . 8.1-8.2	W 9-18, 8.3-8.4,
M 9-23 .8.5 (8.6, 8.7 skip),	W 9-25 Review	M 9-30 Test 2	W 10-02 9.1-9,2
M 10-07 9.3 (9.4 skip) 9.5	W 10-9 .10.1-10.2*	M 10-14 10.3--10.4	W 10-16 10.5-(10.6 skip) Review
M 10-21 Test 3	W 10-23 .11.1-11.2	M 10-28 11.3-11.4	W 10-30 11.5-, 11.6
M 11-04 Test 4	W 11-05 12.1	M 11-11 12.1, 12.2	W 11-13 12.3-12.4
M 11-18 .12-5-12.6	W 11-20 12.7,12.8	M 11-25 12.9	W 11-27 12.10-12.11
M 12-04 Test 5,	W 12-06 Review	M 12-11 11.4-11.6?	Test 6, Final

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Form study groups. Homework: state the problem, show steps, including scratch work, check answers.

Options if a scheduled class does not meet.

A scheduled class is canceled (campus closed for some reason - electrical failure or other emergency, ..., professor breaks a leg, ...) **You are still responsible for the material, as if the class had been conducted. Communicate with your professor through e-mail within the Etudes website.**

Make sure the college has your latest e-mail address, phone number, other personal information.

If the professor is late (traffic, car accident, personal emergency, ...) stay in class and work on the planned section(s) in the textbook as much as possible. Help each other.

Course Objectives (as stated in the Course Outline of Record)

1. INVERSE FUNCTIONS: EXPONENTIAL, LOGARITHMIC, AND INVERSE TRIGONOMETRIC FUNCTIONS.

- a. Define Inverse Functions.**
- b. Restate and Describe Exponential Functions and Their Derivatives.**
- c. Compute Logarithmic Functions.**
- d. Evaluate Derivatives of Logarithmic Functions.**
- e. Analyze Exponential Growth and Decay.**
- f. Describe Inverse Trigonometric Functions.**
- g. Analyze and distinguish Hyperbolic Functions.**
- h. Discuss and use Indeterminate Forms and L'Hospital's Rule.**

2. TECHNIQUES OF INTEGRATION.

- a. Practice Integration by Parts.**
- b. Analyze Trigonometric Integrals.**
- c. Utilize Trigonometric Substitution.**
- d. Employ and decompose Integration of Rational Functions by Partial Fractions.**
- e. Apply Strategy for Integration.**
- f. Recognize Integration Using Tables and Computer Algebra Systems.**
- g. Practice Approximate Integration.**
- h. Evaluate Improper Integrals.**

3. FURTHER APPLICATIONS OF INTEGRATION.

- a. Compute Arc Length.**

- b. Calculate Area of a Surface of Revolution.**
- c. Describe Applications to Physics and Engineering.**
- d. Describe Applications to Economics and Biology.**
- e. Compute Probability.**

4. DIFFERENTIAL EQUATIONS

- a. Set-up and use Modeling with Differential Equations.**
- b. Identify Direction Fields and utilize Euler's Method.**
- c. Recognize and solve Separable Equations.**
- d. Apply Models for Population Growth.**
- e. Recognize and solve Linear Equations.**
- f. Interpret Predator-Prey Systems.**

5. PARAMETRIC EQUATIONS AND POLAR COORDINATES.

- a. Graph Curves Defined by Parametric Equations.**
- b. Explain Calculus with Parametric Curves.**
- c. Locate Polar Coordinates.**
- d. Compute Areas and Lengths in Polar Coordinates.**
- e. Analyze Conic Sections.**
- f. Translate Conic Sections into Polar Coordinates.**

6. INFINITE SEQUENCES AND SERIES.

- a. Discuss Sequences.**

- b. Describe Series.**
- c. Employ The Integral Test and Estimate the Sums.**
- d. Practice The Comparison Tests.**
- e. Illustrate Alternating Series.**
- f. Contrast Absolute Convergence and the Ratio and Root Tests.**
- g. Explain Strategy for Testing Series.**
- h. Interpret Power Series.**
- i. Represent Functions as Power Series.**
- j. Explain and expand Taylor and Maclaurin Series.**
- k. Apply Taylor Polynomials**

Math Division Program SLOs (as stated in the Course Outline of Record)

Program SLOs:

3. Use mathematical tools essential for analyzing quantitative problems and for producing solutions. (Theme: mathematical tools)

4. Apply advanced mathematical concepts and tools (algebra, calculus) essential in upper division academic work and/or workplace tasks. (Theme: advanced mathematical operations—algebra, calculus)

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Course SLO

One sentence that describes a major piece of knowledge, skill, or ability that students can demonstrate by the end of the course

**Finish the sentence, “At end of the course, the successful student will be able to...
“ **Assessment Method****

Major assignment, project or test used to demonstrate or apply outcome

**Remember to have a mix of qualitative and quantitative assessment methods.
Criterion Level**

Reflects satisfactory performance on the SLO

- **At least X percent of students achieve this course SLO.**
- **All students achieve at least the Y level on this SLO.**
- **At least X percent of students achieve the Y level on this course SLO.**

1. Model and solve an applied problem by formulating a definite integral and evaluating the integral using an appropriate algebraic technique (e.g. substitution, integration by parts) or using numerical techniques (e.g. Simpson's Rule or Taylor polynomials). Students will answer questions embedded on a final exam or other in-class exercise. At least 60% of students will achieve at least the 75% level on this SLO.