

Math 5B – Math Analysis II Syllabus (Reedley College Dual Enrollment)

“Pure mathematics is, in its way, the poetry of logical ideas.” - Albert Einstein

Instructor: Mr. Joe Schuster, Dinuba High School – Dinuba, CA

Textbook: *Calculus Early Transcendentals*, by Briggs, Cochran, Gillett, Schulz, Pearson, 3rd Ed., 2019

Student Learning Objectives: By the end of this course, student’s will be able to:

- MATH-5B SLO1: Evaluate definite integrals using the fundamental theorem of calculus and relate definite integrals to areas and Riemann sums.
- MATH-5B SLO2: Apply the use of integrals to problems involving volumes of solids, arc length, surface area, and other applications from science and/or engineering.
- MATH-5B SLO3: Find antiderivatives using a variety of techniques of integration.
- MATH-5B SLO4: Determine the convergence or divergence of infinite series by using appropriate tests and use infinite series to find polynomial representations of transcendental functions.
- MATH-5B SLO5: Analyze conic sections and mathematical relationships given in parametric and polar forms.

Grading

Each student's grade will be based on their relative scores in each of the weighted categories shown below on the left. Below on the right is the overall percentage breakdown.

Grades	Overall Grading Percentage
• Homework 20%	A = 90% +
• Quizzes 10%	B = 80% – 89%
• Tests 50%	C = 65% – 79%
• Midterm/Final 20%	D = 50% – 64%
	F = 0% – 49%

Contact

If you need to contact me, you may:

- Call me at: (559) 595 – 7220 ext. 2536
- E-mail me at: joseph.schuster@dinuba.k12.ca.us
- Twitter: @SchusterMath

Homework: Homework is a vital part of an education in mathematics. It allows the student to practice and achieve mastery over the skill learned in class. Homework will be assigned daily, and due the following Friday at the beginning of class. To receive full credit for assignments, ALL work must be shown and assignments must be turned in on time. Late homework maybe turned in up to a week after its due date for 70% credit.

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Quizzes: We will have one quiz each week, except for weeks where we have a test. If you have an excused absence on the day of a quiz, you may take the quiz on the day you return. If you have an unexcused absence on the day of a quiz, or if you fail to take the quiz on the day that you return, it will be graded as a zero. It is your responsibility to remind me of your need to take the missed quiz.

Tests: We will have one culminating test per unit. These can have multiple choice and/or free response questions. If you have an excused absence on the day of a test, you may take the test on the day you return. If you have an unexcused absence on the day of a test, or if you fail to take the test on the day that you return, it will be graded as a zero. It is your responsibility to remind me of your need to take the missed test.

Midterm and Final: We will have a midterm after we have covered approximately half of the course and a comprehensive final exam at the end of the semester. These may not be taken on any day other than the scheduled day.

Student Responsibilities

- Students are expected to attend class regularly and arrive on time.
- Students are expected to be prepared for class each day, with materials needed to successfully participate.
- Check our Google Classroom regularly and frequently to stay aware of assignments and when those assignments are due.
- Finally... **YOU ARE EXPECTED TO STUDY ON YOUR OWN TIME!!!** If you expect to do well solely off of your in-class time, you are mistaken. This is a college course, and as such it requires that you spend time outside of class studying!

Academic Dishonesty: Students at Reedley College are entitled to the best education that the college can make available to them, and they, their instructors, and their fellow students share the responsibility to ensure that this education is honestly attained. Because cheating, plagiarism, and collusion in dishonest activities erode the integrity of the college, each student is expected to exert an entirely honest effort in all academic endeavors. The student receiving the grade for this course on their transcript must be the person doing the work at ALL times in this class. Academic dishonesty in any

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form is a very serious offense and will incur serious consequences ranging from a failing grade on a specific assignment to a failing grade in the course.

Special Needs Requests: If you have a verified need for an academic accommodation or materials in alternate media (i.e., Braille, large print, electronic text, etc.) per the Americans with Disabilities Act (ADA) or Section 504 of the Rehabilitation Act, you are encouraged to provide me with your notification of authorized services form from DSP&S and consult with me immediately so that arrangements can be made.

Math 5B – Math Analysis II Outline

1. Applications of integration
 - a. Area between curves
 - b. Volumes of solids
 - c. Arc length and surface area
2. Integration Techniques
 - a. Integration by parts
 - b. Trigonometric substitution
 - c. Partial fractions
 - d. Improper integrals
3. Differential Equations
 - a. Slope fields
 - b. Separable differential equations
4. Sequences and Infinite Series
 - a. Testing convergence
 - b. Finding sums of infinite series
5. Power Series
 - a. Approximating functions
 - b. Taylor series
6. Parametric and Polar Curves
 - a. Conic sections

Note: This syllabus is subject to change at the discretion of the instructor.