MATH 2261
ANALYTIC GEOMETRY &

Your course should align to the following:

Standards, Goals, Objectives, or Outcomes

- Area A2

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- Area D

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- Specific Learning Outcomes: In this course the student will learn the methods and applications of differential calculus and the motivation for the integral calculus. Properly using the language and notation g the power, pro

quotient, and chain rules.

4. Analyze and construct graphs of functions by using the Fundamental Theorem of Calculus and substitution to integrals.

Further Information for Instructors

- Questions intended to assess the achievement of specific course objectives will be included in the final exam for every section of MATH 2261 according to the rotation set by the VSU General Education Council.

- Text Summary for Thomas' Calculus: Early Transcendentals, 14ed.

1.1*	Functions and their Graphs	3.7	Implicit Differentiation
1.2*	Combining Functions; Shifting and Scaling Graphs	3.8	Derivatives of Inverse Functions and Logarithms
1.3*	Trigonometric Functions	3.9	Inverse Trigonometric Functions
1.4*	Graphing with Calculators and Computers	3.10	Related Rates
1.5*	Exponential Functions	3.11	Linearization and Differentials
1.6*	Inverse Functions and Logarithms	4.1	Extreme Values of Functions
2.1	Rates of Change and Tangents to Curves	4.2	The Mean Value Theorem
2.2	Limit of a Function and Limit Laws	4.3	Monotonic Functions and the First Derivative Test
2.3	The Precise Definition of Limit	4.4	Concavity and Curve Sketching
2.4	One-Sided Limits	4.5	Indeterminate Forms and L'Hôpital's Rule
2.5	Continuity	4.6	Applied Optimization
2.6	Limits Involving Infinity; Asymptotes of Graphs	4.7	Newton's Method
3.1	Tangents and the Derivative at a Point	4.8	Antiderivatives
3.2	The Derivative as a Function	5.1	Area and Estimating with Finite Sums
3.3	Rules for Polynomials, Exponentials, Products, and Quotients	5.2	Sigma Notation and Limits of Finite Sums
3.4	The Derivative as a Rate of Change	5.3	The Definite Integral
3.5	Derivatives of Trigonometric Functions	5.4	The Fundamental Theorem of Calculus
3.6	The Chain Rule	5.5	Indefinite Integrals and the Substitution Method

*The amount of time for review in Chapter 1 is left to the instructor. Instructors may choose to introduce topics as needed.orsteed .2 -1Tm(.w Tc3860.002 TcN3.1 (t))29.0(te n)-12.2 BDC 0 0 0.039 rg/TT1 2Tj-0.002 Tc:-17.5 (h5.1

5. Apply the derivative to calculate rates of change and solve applied optimization problems.
6. Demonstrate how antidifferentiation and Riemann sums relate to the integral calculus.
7. Use the Fundamental Theorem of Calculus and substitution to compute definite and indefinite integrals.

Tentative Course Schedule

- Include important university dates, such as holidays and the last day to withdraw.
- Include a tentative schedule for assessments used in the course grade, such as unit exams, projects, the final exam, etc., or refer to where due dates can be found (for example, "due dates for homework are in MyMathLab"). Also, include a statement that assessment dates are tentative and may be subject to change.
- Include the university-scheduled final exam time.

Topics

- Include the topics covered. Many students need this to transfer the course.
- Topics could be incorporated into the above Course Schedule

Assignments (Exams, Projects, Homework, etc.)

- General description of the assignments
- Due dates, including the official date of the final exam as indicated by the Registrar
- Policies for missed assignments, make-up assignments, late assignments, and/or extra credit

Recommended Syllabus Statement:
Make-Up Work: Make up work or alternative assignments will be **determin.5(t)-6.3 (:)-6.4(ueTi5(m)-4.6 r)-6.4(3 (:)-6.4(t)-6.4(e**

University Attendance Policy from the VSU catalogue:

“The University expects that all students shall regularly attend all scheduled class meetings held for instruction or examination. . . . It is recognized that class attendance is essentially a matter

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