

# Engineering Calc II

Mike Pierce · Math136 · Fall2023 · Tended 13 July 2023 · Hosted at [coloradomesa.edu/~mapierce2/136](http://coloradomesa.edu/~mapierce2/136)

## Week One · August 21

Monday – Syllabus, Orientation & Recapitulation of Calculus

Tuesday – §6.1 Inverse Function and Their Derivatives

Wednesday – §6.2\* The Natural Logarithmic Function

Thursday – §6.3\* The Natural Exponential Function

## Week Two · August 28

Mon/Tuesday – §6.4\* General Logarithmic and Exponential Functions

Wednesday – §6.6 Inverse Trigonometric Functions

Thursday – §6.7 Hyperbolic Functions

**Add/drop deadline is September 5**

## Week Three · September 4

Mon/Tuesday – §6.8 Intermediate Forms and l'Hospital's Rule

Wednes/Thursday – **First Midterm Exam**

## Week Four · September 11

Mon/Tuesday – §7.1 Integration by Parts

Wednesday – §7.2 Trigonometric Integrals

Thursday – §7.3 Trigonometric Substitution

## Week Five · September 18

Mon/Tuesday – §7.4 Integration of Rational Functions by Partial Fractions

Wednes/Thursday – §7.5 Strategy for Integration, and §7.6

## Week Six · September 25

Monday – §7.7 Approximate Integration

Tues/Wednes/Thursday – §7.8 Improper Integrals

## Week Seven · October 2

Monday – §8.1 Arc Length, and §8.2 Area of a Surface of Revolution

Tues/Wednes/Thursday – §8.3 Applications to Physics and Engineering

## Week Eight · October 9

Mon/Tuesday – §8.4 Applications to Economics, Biology, §8.5 Probability

Wednes/Thursday – **Second Midterm Exam**

## Week Nine · October 16

Monday – §11.1 Sequences

Tuesday – §11.2 Series

Wednes/Thursday – §11.3 The Integral Test and Estimates of Sums

## Week Ten · October 23

Monday – §11.4 The Comparison Tests

Tuesday – §11.5 Alternating Series and Absolute Convergence

Wednesday – §11.6 The Ratio and Root Tests

Thursday – §11.7 Strategy for Testing Series

**Withdraw deadline is October 30**

## Week Eleven · October 30

Monday – §11.8 Power Series

Tuesday – §11.9 Representation of Functions as Power Series

Wednes/Thursday – §11.10 Taylor and Maclaurin Series

## Week Twelve · November 6

Mon/Tuesday – §11.11 Applications of Taylor Polynomials

Wednes/Thursday – **Third Midterm Exam**

## Week Thirteen · November 13

Monday – §6.5, and §9.1 Modelling with Differential Equations

Tuesday – §9.2 Direction Fields and Euler's Method

Wednes/Thursday – §9.3 Separable Equations

## Week Fourteen · November 20

Thanksgiving Break, No Class

## Week Fifteen · November 27

Monday – §10.1 Curves Defined by Parametric Equations

Tuesday – §10.2 Calculus with Parametric Curves

Wednesday – §10.3 Polar Coordinates

Thursday – §10.4 Calculus in Polar Coordinates

## Week Sixteen · December 4

Mon/Tuesday – §10.5 and §10.6 Conic Sections in Polar Coordinates

Wednes/Thursday – **Fourth Midterm Exam**

## Final Exam

Section 002 (11am Class) – Wednesday Dec 13 @ 10am

Display During Exam: [Formula Sheet](#)