

MATH 100: Calculus I

Fall 2018 Syllabus

Week #1

0.1- 0.3 Precalculus review (using online textbook material & Appendix A) 1.1 & 1.2 Functions

Week #2 &3

1.3 Limits

1.4 Calculating limits

1.5 Continuity & Intermediate Value Theorem

1.6 Limits involving infinity

Week # 4

2.1, 2.2 Concept, definition of derivative

2.3 Basic differentiation formulas

2.4 Product and quotient rules

Week # 5

2.5 Chain rule

2.6 Implicit differentiation

Week # 6

2.7 Related rates

2.8 Linear approximations and differentials

Week # 8

3.1 & 3.3 Exponential functions and derivatives

3.2 & 3.3 Logarithmic functions and derivatives

Week # 9 & 10

3.2 Inverse functions

3.5 Inverse trigonometric functions

3.6 Hyperbolic functions

3.7 Indeterminate forms and l'Hospital's rule

Week #11

4.1 Maximum and minimum values

4.2 Mean value theorem

4.3 Derivatives and shapes of graphs

Week # 12

4.4 Curve sketching

4.5 Optimization

Week # 13

4.6 Newton's method

4.7 Antiderivatives