

## MA 223 – Topics List

- I. Finding derivatives
  - Using the constant, power, constant multiple and sum rules
  - Using the product rule
  - Using the quotient rule
  - Using the chain rule – both directly and using related functions
  - Using implicit differentiation
  - Higher order derivatives
  
- II. Applications of the derivative
  - Finding the slope/equation of a tangent line; finding point(s) on a graph where the tangent line is horizontal
  - Finding the rate of change of a function
  - Finding a marginal function; its use in estimating actual change
  - Using increments to approximate the change in a function
  - Finding velocity
  
- III. Applications not using the derivative
  - Finding the  $y$ -value of a point
  - Finding the actual change in a function
  - Finding the slope of a secant line
  - Finding the average rate of change