



## Course Content

<b>Topics to be covered</b>	<b>Lectures</b>
3.4 Related Rates, pp. 204-210,	Lecture 1&2
3.5 Local Linear Approximation; Differentials, pp. 212-218,	Lecture 3 & 4
3.6 L'Hopital's Rule; Indeterminate Forms, pp. 219-227,	Lecture 5
4.1 Analysis of Functions I: Increase, Decrease and Concavity, pp. 232-242	Lecture 6
4.2 Analysis of Functions II: Relative Extrema; Graphing Polynomials, pp. 244-252,	Lecture 7
4.4 Absolute Maxima and Minima (quick review)	Lecture 8
4.5 Applied Maximum and Minimum problems, pp. 274- 284,	
4.7 Newton's Method, pp. 296-300,	Lecture 9
4.8 Rolle's Theorem; Mean-Value Theorem, pp. 302-308,	
<b>1<sup>st</sup> Class Test is due</b>	
6.1 Area between Two Curves, pp. 413-419,	Lecture 10
6.2 Volumes by Slicing: Disks and Washers, pp. 421-429,	Lecture 11
6.3 Volumes by Cylindrical Shells, pp. 432-436,	
6.4 Length of a Plane Curve, pp. 438-441,	Lecture 12
6.5 Area of a Surface of Revolution, pp. 444-447,	&13
6.9 Hyperbolic Functions and Hanging Cables, pp. 474-482,	
<b>Mid Term is due</b>	
7.3 Integrating Trigonometric Functions, pp. 500-507,	Lecture 14
7.4 Trigonometric Substitutions, pp. 508-513,	Lecture 15
7.5 Integrating Rational Functions by Partial Fractions, pp. 514-521,	Lecture 16
7.7 Numerical Integration; Simpson's Rule, pp. 533-543,	Lecture 17
<b>2<sup>nd</sup> Class Test is due</b>	
8.1 Modeling with Differential Equations, pp. 561-566,	Lecture 18
8.2 Separation of Variables, pp. 568-574,	Lecture 19
8.4 First-order Differential Equations and applications, pp. 586-591,	Lecture 20
9.5 The Comparison, Ratio, and Root Tests, pp. 631-636,	Lecture 21
9.8 Maclaurin and Taylor Series; Power Series, pp. 659-666,	Lecture 22 & 23
<b>Final Examination</b>	