**Math 111(Integral Calculus)syllabus**

**The Book: Calculus, The classic Edition by Swokowski**

**Chapter5**

**5.1: Definition (5.1), Theorem (5.2), Definition (5.3), Brief table of indefinite integrals (5.4), Theorem (5.5) with proof, Example 1, Theorem (5.6), Example 2, Example 3, Example 4, Example 5.**

**5.2: Method of substitution (5.7), Example 1, Example 2, Guidelines for changing variables in indefinite integrals (5.8), Example 3, Example 4, Example 5, Example 6, Example 7.**

**5.3: Summation notation (5.9), Example 1, Theorem (5.10), Theorem (5.11), Theorem (5.12), Example 3, Example 4, Definition (5.13), Example 6.**

**5.4: Definition (5.14), Example 2, Definition (5.16), Definition (5.17), Definition (5.18), Theorem (5.19), Example 4, Example 5, Example6, Theorem (5.20).**

**5.5: Theorem (5.21), Example 1, Theorem (5.22), Theorem (5.23), Example 2, Theorem (5.24), Theorem (5.25), Example 3, Theorem (5.26), Corollary (5.27), Example 4, Mean value theorem for definite integrals (5.28) with proof, Example 5.**

**5.6: Fundamental theorem of calculus (5.30) with proof, Corollary (5.31), Example 1, Example 2, Example 3, Example 4, Theorem (5.33), Example 5, Example 6, Theorem (5,35) with proof, Example 8.Exercises (51,52,53,55).**

**5.7: Trapezoidal rule (5.36), Example 1, Simpson's rule (5.38), Example 2.**

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**6.2: Definition (6.5) but without the limit formula, Definition (6.6) but without the limit formula. Guidelines for finding the volume of a solid of revolution using disks (6.8), Example 1, Example 2. A brief description of the method of washers on page (317-318) including formula (6.9). Example 3, and Example 5.**

**6.3: Volume *V* of a cylindrical shell (6.10), Definition (6.11) but without the limit formula. Guidelines for finding the volume of a solid of revolution using cylindrical shells (6.12), Example 1, Example 3.**

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**7.5 Laws of Exponents 7.27 with proof, Theorem 7.28 with proof, example 1 Theorem 7.29,Example 2,Definition of (7.30) Theorem 7.31 with proof4,5,Definition of the general power function and its derivative, Example 5.**

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**8.3 Definition 8.10 with graph, Theorem 8.11(with proof), Definition 8.12,**

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**13.1: Definitions (13.1),(13.2) Examples 1,2,3**

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