CALCULUS II
MA 2320 • SYLLABUS SUMMER 2022

Professor: **Frank Sanacory**   *Office:* **NAB 2043**

Email: SanacoryF@oldwestbury.edu   *Course Web Page:* **sanacory.net**

TEXTBOOK: Single Variable Calculus: Early Transcendentals, 3nd Edition, by Briggs, Cochran, and Gillett, published by Pearson 2014. We will use the MyMathLab version - directions are below.

Prerequisite Grade of C or higher in Calculus & Analytic Geometry I - MA 2310.

COURSE DESCRIPTION: Topics include indefinite and definite integral, applications of definite integral, integration techniques, infinite series, and analytic geometry.

COURSE OBJECTIVES: To become proficient in integration and its applications, to learn about infinite sequences and series.

No Calculators are allowed in this course.

COURSE EVALUATION & GRADING: Your grade for the course will be based on your homework/quiz performance (14%), three tests (51%), and a comprehensive final exam (35%). The grading scale is as follows:

A = [94, 100] A- = [90, 93]	B+ = [87, 89] B = [84, 86] B- = [80, 83]	C+ = [76, 79] C = [70, 75]	F = [0, 69]

ACCOMMODATIONS FOR STUDENTS WITH SPECIAL NEEDS:
If you have or suspect you may have a physical, psychological, medical or learning disability that may impact your course work, please contact Stacey DeFelice, Director, The Office of Services for Students with Disabilities (OSSD), NAB, 2065, Phone: 516-628-5666, Fax (516) 876-3005, TTD: (516) 876-3083. E-mail: defelices@oldwestbury.edu.
The office will help you determine if you qualify for accommodations and assist you with the process of accessing them. All support services are free and all contacts with the OSSD are strictly confidential. SUNY/Old Westbury is committed to assuring that all students have equal access to all learning activities and to social activities on campus.

FINAL EXAM: Will be held on Thursday, July 14

To register for MA 2320 Calculus II:

1. Go to https://mlm.pearson.com/enrollment/sanacory07602.
2. Sign in with your Pearson student account or create your account. For Instructors creating a Student account, do not use your instructor credentials.
3. Select any available access option, if asked.
   - Enter a prepaid access code that came with your textbook or from the bookstore.
   - Buy instant access using a credit card or PayPal.
   - Select Get temporary access without payment for 14 days.
4. Select Go to my course.
5. Select MA 2320 Calculus II from My Courses.

If you contact Pearson Support, give them the course ID: sanacory07602

To sign in later:

1. Go to https://mlm.pearson.com.
2. Sign in with the same Pearson account you used before.
3. Select MA 2320 Calculus II from My Courses.

TOPICS TO BE COVERED

INTEGRATION
5.1 Approximating areas under curves
5.2 Definite integrals
5.3 Fundamental Theorem of Calculus
5.4 Working with integrals
5.5 Substitution rule

APPLICATIONS OF INTEGRATION
6.1 Velocity and net change
6.2 Regions between curves
6.3 Volume by slicing
6.4 Volume by shells
6.5 Length of curves
6.6 Surface area

INTEGRATION TECHNIQUES
8.1 Basic approaches
8.2 Integration by parts
8.3 Trigonometric integrals
8.4 Trigonometric substitutions
8.5 Partial fractions
8.9 Improper integrals

SEQUENCES AND INFINITE SERIES
10.1 An overview
10.2 Sequences
10.3 Infinite series
10.4 The Divergence and Integral Tests
10.5 Comparison Tests
10.6 Alternating series
10.7 The Ratio and Root Tests

POWER SERIES
11.1 Approximating functions with polynomials
11.2 Properties of Power series
11.3 Taylor series
11.4 Working with Taylor series

PARAMETRIC AND POLAR CURVES
12.1 Parametric equations
12.2 Polar coordinates
12.3*Calculus in polar coordinates
12.4*Conic sections
* Optional as time permit