MATH 114 - 003: Analytic Geometry and Calculus II Spring 2022

COURSE INFORMATION:

Instructor: Jingya Yan

Lectures: MW 1:30 pm – 3:20 pm, David King Jr. Hall 1006

E-mail: jyan20@gmu.edu

Office Hours: MW 3:40 pm—5:10 pm or online by appointment

Office: Exploratory Hall 4405

COURSE DESCRIPTION:

Solving geometry and physics problems with definite integrals, applying techniques to evaluate integrals, understanding sequences, series, graph conic sections and basis parametric and polar curves.

PREREQUISITES:

C or better in Math 113

COURSE MATERIALS:

Thomas' Calculus (Early Transcendentals) by Hass, Heil and Weir (fourteenth edition, Pearson publisher).

An access code for MyMathLab is required for this course.

To register: Click the link MyMathLab in Blackboard – Course Content and follow the instructions. (Course ID: yan70422)

Please use your official GMU registration name and your GMU email address to register your MML account.

TENTATIVE SCHEDULE (SUBJECT TO CHANGE):

Jan 24 (week 1): Review of Chapter 5, Volume of Slicing (6.1)

Jan 31 (week 2): Volume by Shells, Length of Curves (6.2, 6.3)

Feb 7 (week 3): Surface Area, Physical Applications (6.4, 6.5, 6.6)

Feb 14 (week 4): Logarithmic and Exponential Functions (7.1, 7.2), **Test 1 on Feb 16**

Feb 21 (week 5): Hyperbolic Functions, Integration by Parts (7.3, 7.4, 8.2)

Feb 28 (week 6): Trigonometric Integrals, Trigonometric Substitutions (8.3, 8.4)

Mar 7 (week 7): Partial Fractions, Other Integration Strategies, Numerical Integration (8.5, 8.6, 8.7)

Mar 14: Spring Break

Mar 21 (week 8): Improper Integrals (8.8), **Test 2 on Mar 23**

Mar 28 (week 9): Introduction to Differential Equations, Sequences (9.1, 9.2, 10.1, 10.2)

April 4 (week 10): Infinite Series, Convergence Tests (10.2, 10.3, 10.4)

April 11 (week 11): Convergence Tests, Power Series (10.5, 10.6, 10.7)

April 18 (week 12): Power Series (10.7), **Test 3 on Apr 20**

April 25 (week 13): Taylor Series (10.8, 10.9, 10.10)

May 2 (week 14): Parametric Equations, Polar Coordinates, Conic Sections (11.1, 11.2, 11.3, 11.6)

Final Exam is scheduled on Monday, May 16, 1:30pm – 4:15 pm.

GRADING:

Three Tests: 15% each

MyMathLab Homework and Quizzes: 15%

Recitation Grade: 15%

Final Exam: 25%

Grade Breakdowns:

A+	A	A-	B+	B	B-
≥98%	92% - 98%	90% - 92%	88% - 90%	82% - 88%	80% - 82%
C+	C	C-	D	F	
78% - 80%	72% - 78%	70% - 72%	60% - 70%	<60%	

You will find homework and quizzes on MyMathLab. Late homework and quizzes are accepted with 20% penalty within one week after the original deadline; after one week you will get zero. Usually there will be homework and quizzes every week. You will have infinite number of attempts for your homework and **5 attempts** for quizzes. The lowest homework score and lowest quiz score will be dropped.

There are three tests and one comprehensive final exam. All exams will be taken in class. No make-up exams will be schedule unless you have a documented excused absence. Calculators are **not allowed**.

DISABILITY SERVICES:

https://ds.gmu.edu/

MATH TUTORING CENTER:

https://science.gmu.edu/academics/departments-units/mathematical-sciences/math-tutoring/tutoring-center-hours-and

HONOR CODE:

Please see the Office for Academic Integrity (https://oai.gmu.edu/) for a full description of the code and the honor committee process, and the Honor Code Policies of the Department of Computer Science (https://cs.gmu.edu/resources/honor-code/) regarding the course project. GMU is an Honor Code university. The principle of academic integrity is taken seriously and violations are treated gravely. If you rely on someone else's work in an aspect of the course project, you should give full credit in the proper, accepted form. Another aspect of academic integrity is the free play of ideas. Vigorous discussion and debate are encouraged in this course, with the firm expectation that all aspects of the class will be conducted with civility and respect for differing ideas, perspectives, and traditions. When in doubt (of any kind) please ask for guidance and clarification.