MATH 114 – 008 Analytic Geometry and Calculus II
Spring 2021

Instructor: *Gabriela Bulancea*
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Lecture (Live Sessions): Tuesday, Thursday 1:30 pm – 3:20 pm
Office Hours: MW 10:20 am - 12:20 pm, or by appointment

Final Exam
Tuesday, May 4, 2021, 1:30 pm - 4:15 pm

Recitation
TA: Jeanie Schreiber   jschrei@gmu.edu
Live Sessions: Friday 8:30 am – 9:20 am, or 9:30 am – 10:20 am

Textbook: *Thomas' Calculus (Early Transcendentals)* by Hass, Heil and Weir (fourteenth edition, Pearson publisher). We cover most of Chapters 6 to 11. We will also use MyMathLab from Pearson, which comes bundled with the book in the various formats.

Prerequisites: C or better in Calculus I (MATH 113).

Broad purpose of the course: At the end of the semester the student should be able to solve various geometry and physics problems that require the use of definite integrals, use techniques of to evaluate integrals, understand infinite series and power series, and be able to identify and graph conic sections and basic parametric and polar curves.

Class Policies

1. **Technology:**
   - **The synchronous part of lectures and recitations will be conducted via Blackboard Collaborate or Zoom sessions. The Blackboard sessions will be recorded, and the recordings will be available to you the duration of the semester. You are expected to attend these live sessions. During lectures I will write on a OneNote Notebook, which you will be able to then access at any time to review lecture notes.**
   - **The exams will be administered via Zoom. To be able to take the exams you will need a working webcam.**
   - **We will be using the online homework system MyMathLab for which you need to the access code associated with the textbook.**
   - **We will be using the Piazza discussion board for posting questions and answers related to the material we discuss in class or to class logistics.**

2. **Teaching and learning method:**
   - As a university student, you are responsible for your own learning.
   - Lecture, demonstration, discussion, problem-solving, tests, and group tasks will be used to help you learn. **Class attendance and completion of assignments are expected.**
   - **Pre-recorded lectures will be posted on the Blackboard page of the course. You should watch these recordings before our live meetings in which we will be discussing the material covered in the corresponding recording.**
   - During the live sessions we will solve additional problems and you will be assigned problems to be worked in class.

3. **Communication:**
- **You will receive weekly Blackboard announcements regarding homework, exams, and specific readings for the respective week.**
- **If you have questions of general interest, please post them on Piazza, so everybody can benefit from having the answer to that question. If you have questions about your academic performance in the class or questions of a confidential nature, please send them to me via email.**

4. **Homework:**
- There will be online homework problems **@ http://www.mymathlab.com** from each section, which will be graded.
- **MyMathLab:** *For instructions on how to register see the handout posted on Blackboard.*

5. **Tests:**
   There is a tentative schedule for tests below. You are responsible for keeping up with all information announced in the classroom and on Blackboard. There will be no makeup tests. You may replace your lowest test grade with your final exam percentage.

6. **Class participation:**
   There will be daily in class poll questions. Your participation to class discussion, Piazza contributions and attendance of office hours will count towards your class participation grade.

7. **Grading:** Grades will be assigned according to the percent system given below:

15% Test 1 Thursday, February 18
15% Test 2 Thursday, March 18
15% Test 3 Thursday, April 15
25% Final Exam Tuesday, May 4
10% Homework
15% Recitation grade
 5% Class participation: based on your participation to in class activities, Piazza discussion board contributions, office hours attendance.

Grading scale:

A-: 90 - 92;	A: 92 – 98;	A+: 98 – 100
B-: 80 - 82;	B: 82 – 88;	B+: 88 – 90
C-: 70 - 72;	C: 72 – 78;	C+ : 78 – 80
D: 60 - 70;	F: 0 – 60.	

8. *Additional Help:*
- *Office hours (instructor, TA, LA)*
- *The Math Tutoring Center will be offering online tutoring via questions/answers posted on Piazza and via Blackboard Collaborate sessions. See http://math.gmu.edu for information about how to access the Tutoring Center and for the current schedule.*

UNIVERSITY POLICIES:

- The University Catalog, http://catalog.gmu.edu, is the central resource for university policies affecting student, faculty, and staff conduct in university academic affairs. Other policies are available at http://universitypolicy.gmu.edu/. All members of the university community are responsible for knowing and following established policies.

- **Honor Code: - It is expected that each student in this class will conduct themselves within the guidelines of the Honor Code. Given the format of the class, it is important to point out that sharing with anyone information of any kind about exams or quizzes (either before or during the tests) or using online resources during the exams will result at a minimum in a grade of zero for all parties involved. Violations will also be reported to the university Honor committee where further consequences such as probation or expulsion from the university may be incurred. See http://academicintegrity.gmu.edu/honorcode for a copy of the Honor code.**
- **Disability Services:** Reasonable accommodations are available for students who have a documented disability. Please contact Disability Services if you require accommodations.
- **COUNSELING AND PSYCHOLOGICAL SERVICES** (CAPS):   http://caps.gmu.edu

Schedule for Math 114 Spring 2021

Week of	Sections Covered	Topic
Jan 25	Review Chapter 5, 6.1	Volume by Slicing
Feb 1	6.2, 6.3	Volume by Shells, Length of Curves;
Feb 8	6.4, 6.5, 6.6	Surface Area, Physical Applications
Feb 15	7.1, 7.2, *Test 1*	Logarithmic and Exponentials Functions,
Feb 22	7.3, 7.4, 8.2	Hyperbolic Functions, Integration by Parts
March 1	8.3, 8.4	Trigonometric Integrals,Trigonometric Substitutions
March 8	8.5, 8.6, 8.7	Partial Fractions, Other Integration Strategies, Numerical Integration
March 15	8.8, *Test 2*	Improper Integrals
March 22	9.1, 9.2, 10.1, 10.2	Introduction to Differential Equations, Sequences
March 29	10.2, 10.3, 10.4	Infinite Series, Convergence Tests
April 5	10.5, 10.6, 10.7	Convergence Tests, Power Series
April 12	10.7, *Test 3*	Power Series
April 19	10.8, 10.9, 10.10	Taylor Series
April 26	11.1, 11.2, 11.3, 11.6	Parametric Equations, Polar Coordinates, Conic Sections
May 4	Final Exam	