

MATH 114 – 002 Analytic Geometry and Calculus II

Fall 2021

Instructor: <i>Gabriela Bulancea</i> E-mail gbulance@gmu.edu Office: Exploratory Hall, Room 4217
Lecture: Tuesday, Thursday 10:30 am – 12:20 pm Office Hours: MW 11:00 am - 12:30 pm, or by appointment You can attend the office hours in-person in my office, or virtually, using the Zoom link on Blackboard or the Zoom link https://gmu.zoom.us/j/8097488760
Final Exam Thursday, December 9, 2021, 10:30 am - 1:15 pm
Recitation: <i>Wednesday 8:30 am – 9:20 am, or 9:30 am – 10:20 am</i> TA: <i>Patricia Madison Sherwood</i> psherwoo@gmu.edu

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:** We will be using the online homework system MyMathLab for which you need to the access code associated with the textbook.
- 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 in-person class in which we will be discussing the material covered in the corresponding recording.**
 - In class we will solve additional problems, some of which you will be asked to attempt to solve on your own and then participate to the class discussion related to finding solutions for these problems.
- 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 the Blackboard discussion board, so that 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 and quizzes:

- There will be online homework problems @ <http://www.mymathlab.com> from each section, which will be graded. Also, each week there will be a short quiz administered online through mymathlab.
- **MyMathLab: To register please use the Mymathlab link posted on the Blackboard page of the course.**

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:

Your participation to class discussion 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, September 16

15% Test 2 Thursday, October 21

15% Test 3 Thursday, November 11

25% Final Exam Thursday, December 9

15% Mymathlab homework and quizzes

10% Recitation grade

5% Class participation: based on your participation to in class activities, 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 is offering free tutoring services for undergraduate students currently enrolled in a GMU Math course. 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. Sharing with anyone information of any kind about exams or quizzes during the time that they are administered or using online resources during 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>
- **Regarding electronic devices** (such as laptops, cell phones, etc.), please be respectful of your peers and your instructor and do not engage in activities that are unrelated to class. Such disruptions show a lack of professionalism and may affect your participation grade.
- **Inclusivity and equity:** George Mason University is an intentionally inclusive community that promotes and maintains an equitable and just work and learning environment. We welcome and value individuals and their differences including race, economic status, gender expression and identity, sex, sexual orientation, ethnicity, national origin, first language, religion, age, and disability.
- **Gender identity and pronoun use:** If you wish, please share your name and gender pronouns with me and how best to address you in class and via email.

Safe Return to Campus Statement

- *All students taking courses with a face-to-face component are required to follow the university's public health and safety precautions and procedures outlined on the university Safe Return to Campus webpage (<https://www2.gmu.edu/safe-return-campus>). Similarly, all students in face-to-face and hybrid courses must also complete the Mason COVID Health Check daily, seven days a week. The COVID Health Check system uses a color code system and students will receive either a Green, Yellow, Red, or Blue email response. Only students who receive a "green" notification are permitted to attend courses with a face-to-face component. If you suspect that you are sick or have been directed to self-isolate, please quarantine or get testing. Faculty are allowed to ask you to show them that you have received a Green email and are thereby permitted to be in class.*
- *Students are required to follow Mason's current policy about facemask-wearing. As of August 11, 2021, all community members are required to wear a facemask in all indoor settings, including classrooms. An [appropriate facemask](#) must cover your nose and mouth at all times in our classroom. If this policy changes, you will be informed; however, students who prefer to wear masks either temporarily or consistently will always be welcome in the classroom.*

Schedule for Math 114-002 Fall 2021

Week of	Sections Covered	Topic
Aug 23	Review Chapter 5, 6.1	Volume by Slicing
Aug 30	6.2, 6.3	Volume by Shells, Length of Curves;
Sept 6	6.4, 6.5, 6.6	Surface Area, Physical Applications
Sept 13	7.1, 7.2, Test 1	Logarithmic and Exponentials Functions,
Sept 20	7.3, 7.4, 8.2	Hyperbolic Functions, Integration by Parts
Sept 27	8.3, 8.4	Trigonometric Integrals, Trigonometric Substitutions
Oct 4	8.5, 8.6, 8.7	Partial Fractions, Other Integration Strategies, Numerical Integration

Oct 11	Tuesday classes do not meet, 8.8	Improper Integrals
Oct 18	9.1, 9.2, Test 2	Introduction to Differential Equations
Oct 25	10.1, 10.2, 10.3	Sequences, Infinite Series
Nov 1	10.4, 10.5, 10.6	Convergence Tests
Nov 8	10.7, Test 3	Power Series
Nov 15	10.8, 10.9, 10.10	Taylor Series
Nov 22	11.1, 11.2, 11.3, 11.6	Parametric Equations
Nov 29	11.3, 11.6	Polar Coordinates, Conic Sections
Dec 9	Final Exam	