



## COURSE SYLLABUS

<b>Course Number</b> MATH 114 – 003	<b>Course Title</b> Analytic Geometry and Calculus II
<b>Fall 2020</b>	<b>2020</b>
<b>Instructor: <i>Gabriela Bulancea</i></b> <b>TA:</b> Doniray Mercer Brusafarro, <a href="mailto:dbrusafe@gmu.edu">dbrusafe@gmu.edu</a>	
<b>Lecture - Live Sessions (attendance required): Monday, Wednesday 1:30 pm – 3:20 pm</b> <b>Recitation: Thursday 4:30 – 5:20 pm or 5:25 – 6:15 pm</b>	
<b>Final Exam</b> <b>Wednesday, December 9, 2020, 1:30 pm - 4:15 pm</b>	
<b>Office Hours</b> <b>MTWR 11:00 am - 12:00 pm, or by appointment</b>	
<b>E-mail</b> <a href="mailto:gbulance@gmu.edu">gbulance@gmu.edu</a>	

**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.

### Technology:

- **The synchronous part of lectures and recitations will be conducted via Blackboard Collaborate or Zoom sessions. You are required to attend these live sessions.**
- **The pre-recorded part of the lectures will be posted on Blackboard.**
- **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.**

### Teaching and learning method:

- As a university student, you are responsible for your own learning.
- Lecture, demonstration, discussion, problem-solving, quizzes, tests, and group tasks will be used to help you learn. **Class attendance and completion of assignments are expected.**

- 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.
- After you watch a recorded lecture, you will have to work on some basic problems related to that lecture and you will have to post your answers on the Piazza discussion board.
- During the live sessions we will solve additional problems and you will be assigned problems to be worked in class.

**Homework:** Students are expected to read the sections to be covered in class prior to attending the class on that subject. There will be online homework problems @ <http://www.mymathlab.com> from each section, which will be graded.

**MyMathLab course id: balancea25173** (For instructions on how to register see the handout posted on Blackboard.)

**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.

**Quizzes:** There will be weekly quizzes administered via mymathlab.

**In class questions:** There will be in class activities, your work in class will account for 10% of the final grade.

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

15% Test 1 Wednesday, September 16

15% Test 2 Wednesday, October 14

15% Test 3 Monday, November 16

20% Final Exam Wednesday, December 9

10% Homework and quizzes

5% Recitation grade

20% Class participation (in class questions, Piazza discussion board contributions, oral presentations)

The grading scale will be:

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.

**Additional Help:** *The Math Tutoring Center will offer 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.*

#### Schedule for Math 114 Fall 2020

Week of	Sections Covered	Topic
Aug 24	Review Chapter 5, 6.1	Volume by Slicing
Aug 31	6.2, 6.3	Volume by Shells, Length of Curves;
Sept 7	<b>Labor Day</b> , 6.4, 6.5, 6.6	Surface Area, Physical Applications

Sept 14	7.1, 7.2, <b>Test 1</b>	Logarithmic and Exponentials Functions
Sept 21	7.3, 7.4, 8.2	Hyperbolic Functions, Integration by Parts
Sept 28	8.3, 8.4	Trigonometric Integrals, Trigonometric Substitutions
Oct 5	8.5, 8.6, 8.7	Partial Fractions, Other Integration Strategies, Numerical Integration
Oct 12	<b>Monday classes meet on Tuesday, 8.8, Test 2</b>	
Oct 19	9.1, 9.2, 10.1, 10.2	Introduction to Differential Equations, Sequences
Oct 26	10.2, 10.3, 10.4	Infinite Series, Convergence Tests
Nov 2	10.5, 10.6, 10.7	Convergence Tests, Power Series
Nov 9	10.7, 10.8	Power Series
Nov 16	<b>Test 3</b> , 10.9, 10.10	Taylor Series
Nov 23	11.1, 11.2, <b>Thanksgiving Recess</b>	Parametric Equations, Polar Coordinates
Nov 30	11.3, 11.6, Review	Conic sections
Dec 9	Final Exam	

### 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, 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.

**Sharing class materials:** Some kinds of participation in online study sites violate the Mason Honor code: these include accessing exam or quiz questions for this class; accessing exam, quiz, or assignment answers for this class; uploading of any of the instructor's materials or exams; and uploading any of your own answers or finished work. Always consult your syllabus and your professor before using these sites.

**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.

**Disability Services:** Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union Building I (SUB I), Suite 2500. Email: [ods@gmu.edu](mailto:ods@gmu.edu) | Phone: (703) 993-2474

**COUNSELING AND PSYCHOLOGICAL SERVICES (CAPS):** <http://caps.gmu.edu>