## Montgomery College - Rockville Campus Spring 2019

## MATH 131 Elements of Mathematics II: Geometry and Algebra

#### **INSTRUCTOR AND RESOURCE INFORMATION**

 Professor: Dr. Maria Brunett

 e-mail:
 maria.brunett@montgomerycollege.edu

 Office:
 Science Center (SC) 354N
 Phone: 240-567-4024 (please use email!)

 TEXT:
 GroupMe:
 See email for info. and sign up in class.

 Office Hours:
 Office Hours:

Learning Assistant (LA): Govina Etwaroo; email: <u>getwaroo@montgomerycollege.edu</u> Study Sessions:

**NOTE:** MC student email is the official means of communication for Montgomery College. The college that students check their student email regularly, and when emailing their instructors that they use their MC student e-mail account, accessible through MyMC.

**Course Description:** This course covers proportions, percent, and real numbers; basic geometry that includes congruence, similarity, symmetry, and transformations; measurement and coordinate geometry; and algebra emphasizing multiple representations. Intended for elementary education majors, the course is also suitable for parents of school-age children. PREREQUISITE: A grade of C or better in MATH 130 or consent of department. Credit: 4 semester hours.

**Important Dates:** To view specific drop deadlines for each of your classes, log into your MyMC account, click on 'My Class Schedule' under Student Quick Links, select the current term, and click on 'View Drop Deadline Dates' at the bottom of the page.

## **Getting More Help with Math:**

The Ackerman STEM Learning Center is located on the ground floor of Science Center West (SW) (240-567-5200). This is an open space to work and/or seek specialized help from faculty and student tutors. Graphing calculators may also be borrowed from the Center. Hours are M - R 8am to 8pm, F 8am - 4pm, Sat. 10am – 3pm.

## **COURSE MATERIALS**

# **MyMathLab**: *Math for Elementary Teachers w/Activities* (Loose Pages w/MyMathLab) 5<sup>th</sup> Edition, Beckmann ISBN 9780134800196.

While the math department lists both the loose pages and MyMathLab access code as required materials, I will not require that you have or view a textbook during class. Homework and activities will be assigned outside of class from the textbook that can be viewed in the etext via MyMathLab access. You may purchase the textbook if you prefer to have a print version for home use. **Note:** If you have previously purchased the book and access code, you do NOT need to purchase a code again. The one-time purchase of the MyMathLab code will be good for as long as you use the current textbook.

A 3-ring binder is *strongly recommended* to collect and organize materials distributed during class, to take notes during class and to complete all work for the online homework assignments. You need to be able to systematically show your work even though only portions of the answer will be entered in MyMathLab®. Bring your notebook to each class and to any office visits with the instructor.

Colored pens or pencils are also useful. For the geometry components of the class, a drawing compass, protractor, and 12-inch ruler are **required.** 

**Internet Access:** In addition to using the internet for online homework via MyMathLab®, you need access to the course Blackboard page to obtain class announcements and materials

**Calculator:** A graphing calculator is **permitted** for this course but any kind of scientific calculator will be acceptable. You will be asked to complete certain tasks without a calculator throughout the course.

# COURSE REQUIREMENTS

Attendance/Participation: Announcements are made via Blackboard not in class. Students are expected to check Blackboard daily. Class time is dedicated to mathematics. Attendance is extremely important in the successful completion of any course, and in this course your participation will be key to learning the "why" behind the math content we will study. You are expected to be on time, focused on class, and stay for the entire class. Use of electronic equipment is not permitted during class. If you must use your phone, please leave the classroom to do so. There should not be any side conversations during the lecture or review of board work. A participation grade will be recorded for each class meeting. If you are late, leave early, have side conversations, use electronics, do not complete classwork, do not work with you groups, or do not go to the board, you will not receive full credit. You should attend all class sessions and contact the instructor as soon as possible when you miss class. It is your responsibility to obtain missed information from blackboard and/or a classmate. You must complete the class handout and classwork activity that you missed. You must hand in these papers by the next class meeting to receive partial credit for the participation grade on the day you were absent. In the case of excessive absences (defined as 3+ sessions for this course) per college policy, you may be dropped from the class.

**Classwork/Paticipation:** You are expected to complete the class activities. You will work in groups that are assigned randomly. The group will be given a portion of the activity to share with the class on the board. If you do not work with your assigned group, do not complete the paper (or do not ask for help if they can't complete the paper) you will not receive full participation points for that day. I would like for participation in class activities to be something that you find interesting and beneficial. Class activity time is not break-time, phone-time, etc. However, this is the time for conversations (about the activity) with other students!!

**Online PRE-CLASS assignments:** You are required to use the online software, MyMathLab®, to complete assignments. These assignments are very brief (maximum of 5 questions) and cover prerequisite material or material that you should master prior to class. MyMathLab provides many opportunities to get help with the problems and you are allowed multiple attempts to complete problems. You must use the MML help options and/or read the textbook to complete these assignments before class. The due dates for the assignments will be the day of the class period that

particular section is scheduled. These assignments must be completed before class – no extensions will be granted unless there is a change to the schedule by the instructor.

**Textbook Homework/Participation:** The problems assigned from the textbook resemble test questions. There are practice problems in each section for which the textbook provides complete solutions. The problems assigned to you for homework are the problems that follow the practice problems. There will be two to five problems from each section assigned. You will be asked (randomly) to write solutions to the problems on the board at the beginning of class and/or when the class resumes after break. Textbook board solutions will contribute to your overall grade. Textbook solutions will be graded favorably as long as you are ready with a reasonable solution or you have a thoughtful question prepared if you are unable to find a solution.

**Quizzes:** Fourteen to fifteen guizzes will be given in a variety of formats: take-home, online, and in-class, as noted in the class schedule. Take-home guizzes will be posted on Blackboard. You must download/print the guiz from Blackboard. Quizzes are due at the beginning of class on the due date. You should place the completed guiz on the table in the front of the room without prompting from me. If you have guestions about the guiz, you must ask no later than the day before the guiz is due. If you do not have the guiz ready to turn in by 2 PM on the due date, the guiz will be considered late. Unless you have submitted an NQA coupon prior to the due date, your guiz score will be subject to a late penalty deduction. Do not work on the guiz during class or come late to class so that you can work on the guiz at the last minute. The guiz will be late if it is handed in after 2 PM or upon a later arrival. If you expect to be late, you can send a photo or a scan of the guiz saved as a PDF (pdf preferred) via email so that your quiz will not be considered late. Please submit the paper quiz in addition to the email version. The deadline for quiz submission is 2 PM the next class meeting after the due date. Quizzes will not be accepted after the deadline. Online guizzes will be via MML. Quizzes will be timed and you will be given at least two attempts to complete the guiz. Inclass guizzes are on the day scheduled on the sections listed.

**Tests:** Three unit tests will be given in written form in class, as noted in the class schedule. The final examination will also be given in written form.

**Makeup Policy:** You have three NQA ("no questions asked") coupons to use to extend the deadline for an online or take-home quiz or as a textbook homework pass. No other makeup arrangements will be available for these items. To use a NQA coupon, you must hand it in via email prior to the due date or submit it in paper form in place of the quiz or homework at the board. NQAs can't be submitted after the due date to extend a deadline or as a homework pass. Make-up tests and in-class quizzes will only be arranged for well-documented excused absences and you must contact the instructor **BEFORE** the test/quiz to make arrangements.

Evaluation Components		Gra	Grading Scale	
MyMathLab® Assignments	10 %	A	90 - 100 %	
Quizzes	20 %	B	80 - 89 %	
PARTICIPATION	5 %	C	70 - 79 %	
Tests	40 %	D	60 - 69 %	
Final Exam	25 %	F	0 - 59 %	

**Course changes:** The instructor reserves the right to alter the schedule of the course if necessary but will notify the students of any changes to the schedule before the changes are implemented. See tentative course schedule on last page of this document.

**Letters of Recommendation:** There has been an increase in the number of requests for letters of recommendation. I can generally handle two to three letters per semester. Students should keep the following guidelines in mind before they request a letter of recommendation:

- i. Grade in course and all exams must be 87% or higher.
- ii. Homework must be completed on time with above average performance.
- iii. Attendance in class must be perfect or nearly perfect.
- iv. Behavior in class must be exemplary no mobile phone use, no laptop use, and no talking at inappropriate times.
- v. Participation in class should be more than perfunctory.

# Course Objectives for MA 131 Elements of Mathematics II: Geometry and Algebra

After completing this second course of a three-course sequence, students will be able to...

## **Proportions and Percents**

- Use pictorial models to represent proportions and percents.
- Employ different methods for solving problems involving proportions and percents.
- Employ procedures for mental computation and estimation of percents.

## **Introductory Geometry**

- Describe, compare, and classify plane figures.
- Use technology to study plane figures.
- Describe, compare, classify and draw space figures.
- Prove or disprove conjectures about geometric shapes.

## Congruence, Symmetry and Similarity

- Perform rigid motions and relate them to congruence, symmetry, tessellations, and similarity.
- Perform basic compass constructions and explain why they work.
- Perform size changes and relate them to similarity.

## **Measurement**

- Use common metric reference measures and make conversions within the metric system.
- Develop basic area formulas and the Pythagorean Theorem in a deductive sequence.
- Find the volume of prisms, cylinders, pyramids and cones.
- Find the surface area of prisms and cylinders.

## Algebra and Coordinate Geometry

- Translate among multiple representations of a function.
- Solve problems involving linear equations and systems of equations.
- Recognize various representations and change patterns of linear and non-linear functions.
- Solve problems with tables, graphs, and equations.
- Solve geometry problems using coordinate methods.

## Blackboard & MML Single Sign-in Set Up Instructions:

## https://www.youtube.com/watch?time\_continue=6&v=--heDdwarh4

#### Enter Your Blackboard Course:

- 1. Sign in to Blackboard and enter your Blackboard course.
- 2. Do one of the following:
  - Select any Pearson link in the Content area.
  - Select Tools in the left navigation and Pearson's MyLab & Mastering on the Tools page. Next, select any course link in the top area of the Pearson's MyLab and Mastering Tools page.

#### **Get Access to Your Pearson Course Content:**

- Enter your Pearson account username and password to Link Accounts. You have an account if you have ever used a Pearson MyLab & Mastering product, such as MyMathLab, MyITLab, MySpanishLab, MasteringBiology or MasteringPhysics.
  - > If you don't have a Pearson account, select **Create** and follow the instructions.
- 2. Select an access option:
  - Enter the access code that came with your textbook or was purchased separately from the bookstore.
  - > Buy access using a credit card or PayPal account.
  - > If available, get temporary access by selecting the link near the bottom of the page.
- 3. From the You're Done page, select Go to My Courses.

Note: We recommend you always enter your MyLab & Modified Mastering course through Blackboard.

## **Get Your Computer Ready**

For the best experience, check the system requirements for your product at: <u>http://www.pearsonmylabandmastering.com/system-requirements/</u>

## Need help?

For help with MyLab & Modified Mastering with Blackboard, go to: <u>http://help.pearsoncmg.com/mylabmastering/bbi/student/en/index.html</u>

## **GENERAL INFORMATION**

#### **Disability Support Services**

If you need an accommodation due to a disability, you should make an appointment to see the instructor to discuss these arrangements. A letter from Disability Support Services (240-567-5058) authorizing your accommodations will be needed.

#### **Other Important Student Information**

In addition to course requirements and objectives that are in this syllabus, Montgomery College has information on its web site to assist you in having a successful experience both inside and outside of the classroom. It is important that you read and understand this information. (<u>http://cms.montgomerycollege.edu/mcsyllabus/</u>)

The link above provides information and other resources to areas that pertain to the following: student behavior (student code of conduct), student e-mail, the tobacco free policy, withdraw and refund dates, disability support services, veteran services, how to access information on delayed openings and closings, how to register for the Montgomery College Alert System, and finally, how closings and delays can impact your classes. If you have any questions, please bring them to your professor. As rules and regulations change they will be updated and you will be able to access them through the link. If any student would like a written copy of these policies and procedures, the professor would be happy to provide them. By registering for this class and staying in this class, you are indicating that you acknowledge and accept these policies.

Any student who has difficulty accessing sufficient food to eat every day, or who lacks a safe and stable place to live, is urged to contact the Dean of Students Affairs on your campus. (<u>http://cms.montgomerycollege.edu/edu/secondary5.aspx?urlid=55</u>).

Furthermore, please notify the professor if you are comfortable in doing so. This will enable her to provide any resources that she may possess.