MA-115-A

Mathematics for Teachers

Spring 2018

Professor: George Ashline

Office: 261 Jeanmarie Hall, Phone: 654-2434

Class Meets: M, W, F 8:30-9:35 AM in St. Edmunds 109

Office Hours: M, F: 1:30–2:30 PM, W: 3:00-4:00 PM, T: 12:30–2:00 PM; appointments available for other times.

Textbook and Course Plan: *Mathematics for Elementary Teachers with Activities*, 4th edition by Sybilla Beckmann, Pearson. In our course, we will focus on Chapters 1 through 6 of this text.

Canvas, Tegrity, Homepage: On Canvas, you can find archived regular class updates and assignments, solutions, and other materials via "Files" and a gradebook. We will use the Tegrity presentation capture system this semester. Tegrity is a technology tool provided by the College to assist in your studies. You can play back class recordings on your personal computer, iPad, mobile phone or other mobile device. You can access recordings by clicking "Tegrity Classes" in Canvas. Tegrity provides study tools such as Bookmarks and Notes that allow you to enter notes that attach right to the class recording. Plan on using Tegrity regularly to replay important class points or review various topics. For more information, please visit the Tegrity Help page at https://sites.google.com/site/tegrityatstmichaels/home.

You can access online information about my courses at http://academics.smcvt.edu/gashline.

Homework: Problems are assigned each class and due the next class, and it is critical to keep up with the homework. Homework is graded based on effort, and late homework will not earn any credit.

Quizzes: Quizzes help you assess your progress in understanding recent course concepts and take place at the end of class on Fridays. Your lowest quiz score will not count toward your final grade.

Exams: There are two in-class semester exams and a comprehensive final exam. The schedule for the exams is:

Exam 1 F, February 23 Exam 2 F, April 13

Cumulative Final Exam W, May 9, 9-11:30 AM

If there is class interest, each exam will have an early optional start time to allow for more time to work on it, and there will also be optional exam help sessions on the previous Thursday PM. If you have a significant conflict with any quiz/exam date, please let me know ASAP beforehand.

Course Description: This course is designed for education majors to develop both a deep conceptual understanding of pre-K-8+ mathematics along with the mathematical knowledge needed to teach these topics. Topics include whole number operations, place value, fractions, integers, decimals, percents, estimation, ratios, and proportions. This course is for non-math majors only and fulfills the Quantitative Liberal Studies Requirement.

Course Goals: In this course, you will:

- Develop a deep understanding of the mathematics in grades preK-8+.
- Increase your flexibility and fluency when operating with whole numbers, fractions, decimals, percents, and integers.
- Explain and justify, orally and in writing, common algorithms and procedures, and your own math thought processes
- Increase your problem solving abilities

Course Topics: Potential course topics include:

- Operations with whole numbers-meanings of and strategies for the arithmetic operations
- Commutative, associative, and distributive operations
- Place value and decimal number system
- Fraction, decimal, and percent concepts
- Computational strategies for operating with fractions, decimals, and percents
- Estimation and mental math
- Operations with integers
- Problem solve integrated throughout these topics

Class Support: Be sure to address questions as they arise, and feel free to stop by my office for help, either during office hours or by making an appointment for another time. If there is class interest, there will be optional Thursday PM help sessions for class support, including sessions before each of our exams. For assistance arranging and/or accessing additional supports, please contact Heidi St. Peter by e-mail at <a href="https://hst.ncbi.nlm.ncbi.

Grading: Grades will be based on the homework, quizzes, and two semester exams as follows:

Homework 20 %
Quizzes 20 %
Semester Exams 20 % each
Final exam 20 %

Make-up quizzes/exams are not given, except with a verifiable emergency/serious illness and notification in advance.

SMC Course Workload expectation: You are expected to devote a <u>minimum</u> of 10 hours per week on average to each 4-credit course during the 15-week semester. In this course, over 3 of these hours are spent in class, and you should expect to spend at least an additional 7 hours of effort per week (on average) outside of this class on readings, homework, writing up results, research, studying for in-class quizzes and exams, and meetings with fellow students and the instructor.

Learning Disabilities: Any student having a documented learning disability that may affect the learning of mathematics is invited to consult privately with me during the first week of the semester so that appropriate arrangements can be made.

Academic Integrity: You are reminded of the academic integrity policy of Saint Michael's College. Academic integrity requires that the work you complete for this class is your own. Some examples of offenses against academic integrity include plagiarism, unauthorized assistance, interference, and interference using information technology. Details about academic integrity offenses and the possible sanctions resulting from them are provided in the Student Handbook and also can be found in the Associate Dean's office.

Class Attendance: This is taken from the Saint Michael's College Online Catalogue's "Academic Regulations":

"Students should understand that the main reason for attending college is to be guided in their learning activities by their professors. This guidance takes place primarily in the classroom and the laboratory.

The following policies have been established:

- 1. Members of the teaching faculty and students are expected to meet all scheduled classes unless prevented from doing so by illness or other emergencies.
- 2. The instructor of a course will set the attendance policy for the course.
- 3. The instructor may report excessive absences to the Associate Dean of the College, who may warn the student.

Significant absences will impact your status in this course, timely assignment completion, and overall course grade.

Advice from Previous Students:

- Stay on top of homework. If you feel yourself falling behind, don't be afraid to ask for help.
- Do not sleep in class, and do your homework. Re-do problems before quizzes and exams.
- Write down all notes during class as your guide to the homework. Doing the homework is how you learn to do problems.
- Definitely do homework every night. If you don't understand a problem definitely use the library solution guide it helps!
- Get help right away and know how to do each type of problem before exams.
- I recommend doing all the homework, because the homework helps a lot. I also recommend if you don't understand something go, use office hours because everything builds off of previous material.
- Do daily HW and see the instructor if there are problems you don't understand. It allows me to finish it all to the best of my ability and go over the problems I don't understand during class or otherwise.
- In general, never fall behind on homework/work it's really hard to catch up!
- Go in and get help as soon as you start feeling lost with the material because everything builds and not knowing the basics in the beginning will snowball and be much worse in the future.
- Stay on top of homework assignments and take advantage of professor's generous help and flexibility.
- Take homework questions very seriously; be sure that you completely understand them before you move on to the next one. Also, check out the library student manual! It helps out a lot when studying for quizzes and exams.
- Always do your homework and pay attention in class!
- Keep up with homework, and pace is the trick!
- It is easy to be successful in this course; stay on top of homework and see the professor as soon as questions come up.
- Do the homework it REALLY helps! Don't be afraid to ask questions.

G. Ashline Mathematics for Teachers Spring 2018