**Math 198**

**Special Topics: Algebra for Non-STEM Majors**

**Fall 2019**

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Office Hours: By appointment

**Text:** Pathways to Math Literacy

Sobecki and Mercer, 2nd edition

A scientific calculator is needed. You may not use the

calculator on your phone during exams.

**Course Format:** Tuesday and Thursday, 5:00-6:15pm

(CRN 33560)

**Prerequisites:** None

**Course Description:**

This course prepares students for college level courses required for non-STEM majors. The course develops understanding of number systems, different representations of numbers, operations, on numbers, including numbers expressed in scientific notation. The course introduces linear functions, their graphs, and modeling relationships between quantities using functions. Topics also include simplifying polynomial, radical, and exponential expressions,; solving, analyzing, and modeling linear equations; analyzing and modeling exponential equations; writing and solving systems of linear equations and using geometric formulas. Throughout the course, there will be an emphasis on modeling and solving real world problems.

**ATTENDANCE**

An integral part of this course will involve information and insights developed through the interactions of students with each other and with the instructor. Clearly, students must be present in class to participate, contribute, and profit from these activities. Since group work and collaborative exercises are essential to the course, attendance is extremely critical to your success in the class – group activities completed in class are not able to be made up. In addition, students in this class are preparing for a profession requiring a high degree of responsibility and organization. Therefore, students are expected to attend class, be on time, and stay the entire period. Attendance will be taken each day. Students arriving more than 15 minutes late to class or leaving early will be counted as absent for that class. If there are unusual circumstances beyond the control of the student, then the student should talk to the instructor immediately after class. *Chronic absences or lateness will reduce your overall grade by 4 percentage points for each absence beyond 3. Absence does not excuse you from assignments and exams!*

**HOMEWORK**

Homework is a necessary and integral part of this course! It should be done in a neat and orderly manner as it may be collected and graded. It is strongly recommended that you do these assignments on loose-leaf notebook paper. You may wish to copy specific pages (with charts or tables) from your text, but I will not accept pages that have been torn out of your text or notebook. When submitting multiple page assignments, you must have these papers either stapled or held together with paper clips. Dog-eared pages are not acceptable. *Late assignments will NOT be accepted.*

**EVALUATION**

Exam #1 10%

Exam #2 20%

Exam #3 20%

Exam #4 20%

Graded Homework 30%

Final averages will be assigned letter grades according to the following

scale:

90-100% A, 80-89% B, 70-79% C

60-69% D, 0-59% F

**MAKE UP POLICY**

If a student is unable to take any of the in-class exams, the student ***may*** request a make-up exam. Only students with valid reasons (illness, family emergency, etc.) will be permitted to schedule a make-up exam. Documentation must be provided. Make-up exams that are given will be considerably more difficult than the scheduled exam and will be given the last week of class. Please note that this policy only applies to exams – no other in-class work may be made up.

**ACADEMIC INTEGRITY**

Provisions of the Student Code of Conduct included in the Student Handbook will be followed. During quizzes and exams, each student is expected to do his/her own work. Cheating will not be tolerated. Violators of this policy may receive a zero. In serious cases, your instructor can seek more severe penalties.

**Some** of the behaviors that will be considered cheating are:

* Communicating with another student during a quiz or exam
* Copying material from another student during a quiz or exam or from any assignment being graded
* Allowing another student to copy from your quiz, exam, or any assignment being graded
* Use of unauthorized assistance on any assignment being graded
* Use of unauthorized notes or books during a quiz or exam
* Providing or receiving a copy of a quiz or exam used in the course
* Use of a cell phone or pager to transmit information during a quiz or exam

**Strategies for Success**

In order for you to be successful in your mathematics courses, the faculty of the mathematics department has developed the following common expectations of all students in mathematics courses.

1. As a student, you need to take responsibility for your own learning. This includes, but is not limited to:

* Arriving on time for each class
* Staying for the entire class and not leaving class early
* Actively participating in class and not sleeping or putting your head down
* Not engaging in other activities that detract from the classroom learning experience
* Bringing the required materials to class. These might include textbooks, notebooks, binders, pencils, pens, and calculators.
* Taking care of all business (phone calls, bathroom breaks, getting food, drinks, things from cars, etc.) before class starts.

1. You are expected to be an *active* learner in the classroom as well as out: to participate in group discussion, ask and answer questions, and work problems at the board.
2. You are expected to study your textbook, not merely work problems from it. The best way to do this is to read the section to be covered before the lecture is given, listen to the lecture and take notes, and then study the text again before tackling the practice problems. If this seems like a lot of work, remember that you need to allot ***2 hours outside of class*** for each hour in class. This time commitment increases for online, web-hybrid, and computer-assisted classes.
3. There is no substitute for continued and ongoing studying and doing homework problems. The best way to learn mathematics is to do mathematics.
4. It is your responsibility to keep your homework up-to-date. If you are having difficulty with the course material, then you need to take action right away – do not wait until you have lost all hope! There are several options to get assistance:
   * Talk to your instructor during office hours.
   * Visit the student success center on campus.
5. Realize that college level mathematics can be hard and is not always fun.
6. You are given the means to keep track of your grade and are expected to take responsibility for knowing your grade status throughout the semester.
7. Learning mathematics is different from learning other subjects. In a mathematics course, you must be able to do four things:
   * 1. *Understand* the material.
     2. *Process* the material.
     3. *Apply* what you have learned to solve a problem correctly, and
     4. *Remember* what you have learned in order to learn new material.
8. Another reason that learning mathematics is different from learning other subjects is that it follows a sequential learning pattern, which simply means that the material learned on one day is used the next day and the next day, and so forth. This building block approach to learning mathematics is the reason it is difficult to catch up when you fall behind.
9. Mathematics is a speed subject. College mathematics courses cover twice the material in the same time frame as do high school mathematics courses. Faculty has a certain amount of material to be covered each semester. They have to finish certain chapters because the next course is based on the information taught in this course. Improve your study skills so you can keep up!
10. Another way mathematics is a speed subject is that most of the exams and quizzes are timed and many students think that they will run out of time. Students not only must understand how to do the mathematics problems but also must learn the mathematics well enough to complete the problems with enough speed to finish the test.
11. During the first few days of class, do not take the attitude that “I already know this material” and start to slack off by not taking notes or not completing homework assignments. Good study habits start from the first day of class. Start practicing good study habits now while the material is familiar to you. In that way, those habits will already be a part of your routine when the material becomes more challenging.
12. Take pride in your work and never let yourself fall into the trap of believing that you cannot do mathematics. Virtually everybody can, if he or she is willing to work hard enough. Be persistent and determined in your work.

**Course Schedule**

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| Tuesday  August 27 | **In Class**  • Brief introduction of students and instructor.  • Let’s start talking about math!  • Overview of Course  **Homework**  • Purchase textbook  • Review syllabus and course policies  **Prep for Next Class**  • Continue working on the handout from today’s class. |
| Thursday  August 29 | **In Class**  • Lesson 1-1  **Homework**  • Complete the application problems for Lesson 1-1 on Pages 15 – 17.  **Prep for Next Class**  • Complete the Lesson 1-4 Prep Skills on Pages 45 - 46. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  September 3 | **In Class**  • Lesson 1-4  **Homework**  • Complete the application problems for Lesson 1-4 on Pages 55 – 56.  **Prep for Next Class**  • Complete the Lesson 1-5 Prep Skills on Pages 57 – 58. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  September 5 | **In Class**  • Lesson 1-5  **Homework**  • Complete the application problems for Lesson 1-5 on Pages 71 – 72. .  **Prep for Next Class**  • Complete the Lesson 1-7 Prep Skills on Pages 87 – 88. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  September 10 | **In Class**  • Lesson 1-7  **Homework**  • Complete the application problems for Lesson 1-7 on Pages 101 – 102.  **Prep for Next Class**  • Exam #1 is coming up in a week. Start reviewing your notes and homework to see what you need to work on. Don’t forget! |
| Thursday  September 12 | **In Class**  • Review for Exam #1  **Homework**  • Finish the **Unit 1 summary** on pages 142-148.  **Prep for Next Class**  • Study for Exam #1. |
| Tuesday  September 17 | **EXAM #1**  **Prep for Next Class**  • Complete the Lesson 2-1 Prep Skills on Page 151-152. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  September 19 | **In Class**  • Lesson 2-1  **Homework**  • Complete the application problems for Lesson 2-1 on Page 163  **Prep for Next Class**  • Complete the Lesson 2-2 Prep Skills on Page 165 |
| Tuesday  September 24 | **In Class**  • Lesson 2-2  **Homework**  • Complete the application problems for Lesson 2-2 on Pages 177 – 178.  **Prep for Next Class**  • Complete the Lesson 2-3 Prep Skills on Pages 179 – 180. |
| Thursday  September 26 | **In Class**  • Lesson 2-3  **Homework**  • Complete the application problems for Lesson 2-3 on Pages 189 – 190.  **Prep for Next Class**  • Complete the Lesson 2-4 Prep Skills on Pages 191 – 193. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  October 1 | **In Class**  • Lesson 2-4  **Homework**  • Complete the application problems for Lesson 2-4 on Pages 205 – 206.  **Prep for Next Class**  • Complete the Lesson 2-6 Prep Skills on Page 227. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  October 3 | **In Class**  • Lesson 2-6  **Homework**  • Complete the application problems for Lesson 2-6 on Pages 239 – 240.  **Prep for Next Class**  • Exam #2 is coming up in a week. Start reviewing your notes and homework to see what you need to work on. Don’t forget! |
| Tuesday  October 8 | **In Class**  • Review for Exam #2  • In-Class Project  **Homework**  • Keep working on the Unit 2 summary on pages 273-278.  **Prep for Next Class**  • Study for Exam #2. |
| Thursday  October 10 | **EXAM #2**  **Prep for Next Class**  • Complete the Lesson 3-1 Prep Skills on Pages 281 – 282. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  October 15 | **In Class**  • Start Lesson 3-1  **Homework**  • Start working on the application problems for Lesson 3-1 on Pages 293 – 294.  **Prep for Next Class**  • Review your notes from today’s class. If you have any questions on what we covered, be sure to ask them next class! |
| Thursday  October 17 | **In Class**  • Finish Lesson 3-1  **Homework**  • Finish the application problems for Lesson 3-1 on Pages 293 – 294.  • Keep working on the Unit 3 – Part I assignment in ALEKS.  **Prep for Next Class**  • Complete the Lesson 3-2 Prep Skills on Pages 295 – 296. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  October 22 | NO CLASS |
| Thursday  October 24 | **In Class**  • Lesson 3-2  **Homework**  • Complete the application problems for Lesson 3-2 on Pages 307 – 308.  • Keep working on the Unit 3 – Part I assignment in ALEKS.  **Prep for Next Class**  • Complete the Lesson 3-3 Prep Skills on Pages 309 – 310. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  October 29 | **In Class**  • Lesson 3-3  **Homework**  • Complete the application problems for Lesson 3-3 on Pages 323 – 325.  **Prep for Next Class**  • Complete the Lesson 3-5 Prep Skills on Pages 341 – 342. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  October 31 | **In Class**  • Lesson 3-5  **Homework**  • Complete the application problems for Lesson 3-5 on Pages 353 – 356.  • Keep working on the Unit 3 – Part I assignment in ALEKS.  **Prep for Next Class**  • Exam #3 is coming up in a week. Start reviewing your notes and homework to see what you need to work on. Don’t forget! |
| Tuesday  November 5 | **In Class**  • Review for Exam #3  **Homework**  • Finish the **Unit 3 summary** on pages 445-451.  **Prep for Next Class**  • Study for Exam #3. |
| Thursday  November 7 | **EXAM #3**  **Prep for Next Class**  • Complete the Lesson 3-6 Prep Skills on Pages 357 – 358. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  November 12 | **In Class**  • Lesson 3-6  **Homework**  • Complete the application problems for Lesson 3-6 on Pages 369 – 371.  **Prep for Next Class**  • Complete the Lesson 3-7 Prep Skills on Pages 373 – 374. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  November 14 | **In Class**  • Lesson 3-7  **Homework**  • Complete the application problems for Lesson 3-7 on Pages 387 – 390.  **Prep for Next Class**  • Complete the Lesson 3-8 Prep Skills on Pages 391 – 392. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Tuesday  November 19 | **In Class**  • Lesson 3-8  **Homework**  • Complete the application problems for Lesson 3-8 on Pages 403 – 405.  **Prep for Next Class**  • Complete the Lesson 3-10 Prep Skills on Pages 423 – 424. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  November 21 | **In Class**  • Start Lesson 3-10  **Homework**  • Start working on the application problems for Lesson 3-10 on Pages 437 – 439.  **Prep for Next Class**  • Review your notes from today’s class. If you have any questions on what we covered, be sure to ask them next class! |
| Tuesday  November 26 | **In Class**  • Finish Lesson 3-10  **Homework**  • Finish the application problems for Lesson 3-10 on Pages 437 – 439.  **Prep for Next Class**  • Complete the Lesson 4-5 Prep Skills on Pages 515-516. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  November 28 | NO CLASS |
| Tuesday  December 3 | **In Class**  • Lesson 4-5  **Homework**  • Complete the application problems for Lesson 4-5 on Pages 527-530.  **Prep for Next Class**  • Complete the Lesson 4-6 Prep Skills on 531-532. If you having trouble answering the follow-up questions, be sure to ask next class! |
| Thursday  December 5 | **In Class**  • Lesson 4-6  **Homework**  • Complete the application problems for Lesson 4-6 on Pages 543-544.  **Prep for Next Class**  • Exam #4 is coming up in a week. Start reviewing your notes and homework to see what you need to work on. Don’t forget! |
| Tuesday  December 10 | **In Class**  • Review for Exam #4  **Homework**  • Finish the **Unit 4 summary** on pages 618-623.  **Prep for Next Class**  • Study for Exam #4. |
| Thursday  December 12 | **Exam #4** |