MTH 143.002 – Finite Mathematics – Fall 2018

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Class meeting time and place: Section 002 – Monday/Wednesday/Friday 10:00a.m.- 10:50a.m. – in M202

Office Hours: These hours have been set aside specifically to help students. Additional times are available by appointment.

AARC (Academic Assistance Resource Center):
Free tutoring is available from the AARC. They offer one-on-one peer tutoring and the Math Walk-in Table. The hours for the Walk-in Table are 1pm to 8pm Monday through Thursday as well as 4pm to 8pm on Sundays. Sign-ups for one-on-one tutoring begin soon. It is a first-come, first-serve basis so you may want to register early. If you need help signing up, the AARC staff (first floor of library, right-hand side) will be happy to assist. You can find more information on the AARC website, www.sfasu.edu/aarc.

Tips for Succeeding in Math
- Measure success as understanding and being able to do new problems, not as having completed the assignment.
- Try to understand definitions and solving approaches. See if you can find examples that work and examples that don’t for a certain procedure. It is as important to know when you can’t do something as when you can.
- Take the time to read the book (ebook) and review your notes before and after class.
- Practice explaining big ideas and problem solving procedures in your own words.
- Have someone check your work after you have finished it to help eliminate mistakes that you do not know you are making.
- Treat mistakes as a learning experience. If you don’t make mistakes, you aren’t learning.
- Realize that math is hard. Some parts are harder for some people than others. Mathematicians frequently find it hard to learn new things sometimes and make mistakes on things we already know. The key is to refresh the basics, and keep working, even it takes hours, days, weeks, or months.
- Some people take longer to understand things than others. Evaluate how you study and seek to study smarter, not necessarily longer. If you are still stuck, get some help. The AARC and I are here for you!

Required Text/Materials/Resources
1. MyMathLab Access Code: The hard copy of the text is optional, but you must purchase the MyMathLab Access Code that is associated with the text (you can do this online with a credit card during the registration process). A 14 day temporary access to MyMathLab (MML) is available, so you should registered for MML on the first day of class! The textbook is Finite Mathematics with Applications in the Management, Natural, and Social Sciences, 12th Edition, by Lial, Hungerford, Holcomb, and Mullins. Pearson.
2. Scientific Calculator: The TI-30XS Multiview is recommended. Other calculator recommendations include TI-30X IIS, or TI-34 Multiview.
3. Graphing calculators and calculators on cell phones, computers or tablets are not permitted. Students are responsible for learning how to operate their calculators.
4. One 3 Ring Binder (1.5")
5. Access to 3 Hole Punch
6. Six 3 Ring Binder Dividers
7. Several packages of Writable Post-It Tabs
8. 3 Hole Punched Loose Leaf Notebook Paper (1 – 2 packages)
9. Access to Printer: Fill-in-the-blank notes will be posted on D2L for each section that we cover. You are responsible for printing them, placing them in your 3 ring binder, and bringing them to class.
10. Access to High Speed Internet
Course Description: MTH 143 covers mathematical functions and graphs, linear systems of equations, matrices, linear programming, mathematics of finance, and applications.

Program Learning Outcomes (PLO): This is a general education core curriculum course and no specific program learning outcomes for this major are addressed in this course.

Core Objectives (CO):
1. Critical Thinking [CO 1]: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information
2. Communication Skills [CO 2]: to include effective development, interpretation and expression of ideas through written, oral and visual communication
3. Empirical and Quantitative Skills [CO 3]: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions

Student Learning Outcomes:
At the end of MTH 143, a student who has studied and learned the material should be able to:
1. Use linear functions and quadratic functions in business applications. [CO: 1,2,3]
2. Use matrices to solve systems of linear equations. [CO: 1,3]
3. Use matrices to solve linear programming problems. [CO: 1,3]
4. Use exponential functions and logarithmic functions and to solve equations using these functions. [CO: 1,2,3]
5. Solve simple interest and compound interest problems including annuities. [CO: 2,3]

General Education Core Curriculum:
This course has been selected to be part of Stephen F. Austin State University’s core curriculum. The Texas Higher Education Coordinating Board has identified six objectives for all core courses: Critical Thinking Skills, Communication Skills, Empirical and Quantitative Skills, Teamwork, Personal Responsibility, and Social Responsibility. SFA is committed to the improvement of its general education core curriculum by regular assessment of student performance on these six objectives. No Core Objectives are being assessed this semester.

<table>
<thead>
<tr>
<th>Core Objective</th>
<th>Definition</th>
<th>Course Assignment Title</th>
<th>Date Due in D2L</th>
</tr>
</thead>
<tbody>
<tr>
<td>Critical Thinking Skills</td>
<td>To include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Communication Skills</td>
<td>To include effective development, interpretation and expression of ideas through written, oral, and visual communication.</td>
<td>NA</td>
<td>NA</td>
</tr>
<tr>
<td>Empirical and Quantitative Skills</td>
<td>To include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.</td>
<td>NA</td>
<td>NA</td>
</tr>
</tbody>
</table>

Course Requirements/Assessments: Overview
The core objective(s) satisfied by each assignment type are indicated in brackets
- Three in-class exams [CO: 1,2,3]
- Daily work [CO: 1,2,3]
- Comprehensive final exam [CO: 1,2,3]

Grading Policy: The semester grade will be determined using the following formula: Semester Grade = .20(Daily) + .60(Semester Exams) + .20(Final Exam)

<table>
<thead>
<tr>
<th>Final Grade Components</th>
<th>Grading Scale</th>
<th>Exam Dates</th>
</tr>
</thead>
<tbody>
<tr>
<td>20% Daily Work</td>
<td>89.5% ≤ Grade ≤ 100%: A</td>
<td>Exam 1: 9/24</td>
</tr>
<tr>
<td>60% Semester Exams (3 @ 20% each)</td>
<td>79.5% ≤ Grade &lt; 89.5%: B</td>
<td>Exam 2: 10/19</td>
</tr>
<tr>
<td>20% Comprehensive Final Exam</td>
<td>69.5% ≤ Grade &lt; 79.5%: C</td>
<td>Exam 3: 11/16</td>
</tr>
<tr>
<td>100% Final Course Grade</td>
<td>59.5% ≤ Grade &lt; 69.5%: D</td>
<td>Final: 12/12 (Date is Fixed)</td>
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<tr>
<td></td>
<td>0 ≤ Grade &lt; 59.5%: F</td>
<td></td>
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</table>
Attendance Bonus: Students who have fewer than three absences (2 or less) will be awarded 2 percentage points at the end of the semester. The only exception will be absences excused for approved school functions. Other absences (excused or not) will be counted in your absence total. Participating in class and asking questions to receive the benefit of understanding the material is of utmost importance.

Course Assessment Details

- **Daily Work** – Daily work may consist of online MyMathLab homework, in-class quizzes/activities, notebooks, and worksheets/paper assignments. “Work” provided from any type of mathematical step assistance program will be awarded a grade of zero. All daily work will be accepted only if turned in on time with the exception of online homework which can be completed after the due date for 50% credit.

- **Online MyMathLab Homework** — MyMathLab is online software through which you have access to homework as well as many other supplements including an online eText and videos. MML online homework is due each class day for the purpose of preparing for quizzes and material contained on exams. Understanding homework is how you become responsible for identifying the topics with which you need to spend more time or seek help. Work each homework assignment on loose leaf 3 hole punched notebook paper, labeling the title of the homework, copying down each problem with the corresponding problem number, and working the steps for each problem to arrive at a solution. You will box in your solution and enter the solution into MyMathLab. This homework should be kept in your 3 ring binder. Your homework should be organized and should reflect your thought process so that you or your instructor can look at and understand your work. Be prepared to show your instructor the homework section of your binder at any time during the semester. It is the students' responsibility to log into MyMathLab each day to check on assignments and due dates. The online homework is listed in MML under the “Homework” tab. You can attempt each problem three times before it will regenerate new numbers for the problem. You may re-work each problem until you get it correct. MML assignments are due 30 minutes prior to our class meeting time. Homework due dates in MML will NOT be extended. If you are working on an online assignment close to the due date time, you will be cut off at the due date time (whether you are finished or not). You can access online assignments past the due date and work on them for 50% credit. In this case, be sure to only work problems that are marked completely wrong or problems that you've not attempted. Failure to submit assignments by the due date will result in zeros.

- **Technological issues** do not constitute an excuse for incomplete assignments. If you have any technical problems with MyMathLab, you must contact MML directly. Contact MML support at 1 (800) 677-6337.

- **In-Class Quizzes/Activities** – You will be given in-class quizzes/activities/group work. If you are not present on the day of an in-class assignment, your grade on the assignment will be a zero. No makeups will be given in any circumstance (including emergencies). See "Low Daily Scores" below for low-grade accommodations.

- **Notebooks** – Student notebooks may be taken up and graded as per notebook organizational instructions provided by your instructor. Students should bring their organized 3 ring binder to class each day.

- **Worksheets/Paper Assignments** – If you are asked to turn in worksheets/paper assignments, these will be accepted only on-time. For paper assignments, please write on one side of paper only and include your name, date, course and section number. Any work handed to the instructor must be organized, complete, and with work shown. If you are absent on the day an outside of class worksheet or paper assignment is due, please email the assignment as a pdf document, at or before class-time, to lewisjl5@sfasu.edu using CamScanner. Assignments not meeting these requirements will earn a grade of zero.

- **Make-up Policy**: There will be no makeup exams or daily work. The comprehensive final exam grade will replace a lower exam grade or a zero for a missed exam. The final exam grade will not replace a zero received for academic dishonesty.

- **Low Daily Scores** – Three low daily grades will be dropped to accommodate for missed work/emergency situations.

- **Semester Exams** – Each semester exam will be mainly free response and work must be shown for credit/partial credit. Reviews for each exam will be posted on D2L. Students are expected to thoroughly prepare for exams. Students must abide by the Exam Day Procedures listed below in the syllabus.

- **Comprehensive Final Exam** – The final is university scheduled and cannot be taken at a different time without permission of the Dean of the College of Sciences and Mathematics. Since you have a full semester to arrange any travel plans, they are not an excuse for missing the final exam. **The final exam is on Wednesday, December 12 from 10:30 a.m. – 12:30 p.m. in our classroom.** There are no makeups for the comprehensive final exam. Information concerning format and number of questions will be given during the last week of the semester.
Exam Day Procedures

- A student ID with photo is required for all exams. Place your student ID face-up on your desk. No ID, no exam grade.
- Remove hats or turn them around backwards on exam days.
- Turn cell phones off and place them in your backpack or bag.
- Put belongings not needed for your exam in your backpack or bag and place them along a wall of the classroom not under a whiteboard.
- If you have exam/assignment accommodations and proper documentation from DS, inform the instructor at least a week prior to the exam or assignment.
- If a student must miss an exam due to an excused absence, arrangements should be made in advance.
- If you miss an exam because of illness or an unforeseen event, I will replace your missed exam grade with your final exam grade. Only one exam score may be replaced. There are no makeup exams.
- Please note that the dates for the regular in-class exams are subject to change.
- Please allow one week for your exams to be graded and returned.

Classroom Policies

- **Materials for Class** – Before class, please get out pen/pencil/highlighters, paper, printed course notes, binder, and calculator and place these on your desk. All other materials should be put away and placed in your backpack/bag along a wall of the classroom not under a whiteboard.
- **Class Attendance, Participation, Tardiness** – Attendance is expected and recorded for all students. Students are expected to attend all class meetings, arriving on-time, staying for the entirety of the class, and actively participating in class. Bring all necessary materials to each class, be attentive to the task at hand, take notes, and be prepared to participate in class discussions and group work activities. Missing in-class activities, quizzes, etc., will lower your daily average. Missing classes will significantly reduce the instruction you receive and will therefore decrease your semester grade. If you are absent, you are responsible for turning in paper assignments as a pdf document, on time, via email, determining what you missed, completing online assignments, and for preparing for class when you return. Arriving late or leaving class early (10 minutes or more) will result in your being counted absent for the class session. Students who are tardy (less than 10 minutes late), should always inform the instructor after class or else be counted absent. Three tardies will be counted as one absence. Students who sleep in class, fail to participate, send or receive text messages, or conduct other activities not directly related to class will be counted absent and may be dismissed from class. Please inform your instructor of any known emergency situations that might cause you to come late or leave early. You may still be counted absent in these situations, but the courtesy of informing your instructor will be well received.
- **Distractions** – Our classroom should be as distraction-free as possible. Please be prepared for class so that you do not need to leave during class. Please arrive before roll call to minimize distractions. Please avoid attention-drawing behaviors that would distract others. Please refrain from carrying on conversations during class not relating to the topic at hand.
- **Cell Phone Policy** – Our classroom is a no cell-phone zone. Upon entering the classroom, please turn cell phones off and place them in your backpack or bag and place your backpack/bag along a wall of the classroom not under a whiteboard. If you do not bring a bag to class, place your cell phone in the whiteboard tray at the front of the room. If you have a job such as an emergency responder and need to have you phone on your person at all times, please consult your instructor. In the case of an expected emergency phone call, please inform your instructor before class. If your phone rings during class or you use your phone in class, you will be dismissed.
- **Personal Computer Policy** – I ask that students not use personal computing devices during class unless proper documentation requesting such permission is provided to the instructor prior to such use.
- **Behavior** – Be respectful; be courteous. If it would not be appropriate in a work environment, it is not appropriate in our classroom. Keep language clean and respectful. Students should feel comfortable and safe in my classroom and I expect professional behavior.
- **Food/Drink** – Water is allowed; other food/drink is not allowed.

Outside of Class

- **Preparing for Class** — For every one hour in class, students should be prepared to invest at least 2 hours outside of class to review notes, refer to the online textbook, practice examples, and understand homework exercises. *Material to be discussed in class should be read before coming to class.*
- **Print Course Notes** – Notes will be posted on D2L for each section of material. It is the students’ responsibility to print these notes and bring them each class day. You should use a hole punch and place these notes in your three-ring binder in the appropriate section.
● **Daily Work** – Daily work prepares you for your exams. You should make every effort to fully understand your daily work (not just to complete the assignments). Please ask questions concerning topics that are unclear!

● **Check Email/D2L** – Check your university email and announcements on D2L regularly, as I may send reminders, assignments, or announcements.

● **Seek Help** – Identify the topics from the homework that you struggle with by starring these items in the MyMathLab homework section of your binder. Take pictures of these problems (using CamScanner) and email them to your instructor as a pdf document. Be sure to include the actual problem as well as your work. Ask specific questions. In other words, “I got stuck when I got to the part after I multiplied both sides by the LCD. Can you guide me to my next step?”

● **Use of Outside Resources** – You should never use online resources that show you how to do each step of your exact homework problem. Such resources are a crutch and you will crash and burn on the exams if this is how you’ve completed your homework assignments. I expect you to use your course notes, MyMathLab resources, online textbook and to email me with your questions. On quizzes and exams, I expect you to only use your brains, pencil, paper, and, sometimes, a calculator.

● **Communicate** – If you are critically ill or have a situation arise, please let me know in a timely manner! I can usually accommodate students if I am informed of the situation at the time. After the fact, I may not be able to help you.

### University Policies

- **Academic Integrity (A-9.1)**: Academic integrity is a responsibility of all university faculty and students. Faculty members promote academic integrity in multiple ways including instruction on the components of academic honesty, as well as abiding by university policy on penalties for cheating and plagiarism.

  **Definition of Academic Dishonesty**
  
  Academic dishonesty includes both cheating and plagiarism. Cheating includes but is not limited to (1) using or attempting to use unauthorized materials to aid in achieving a better grade on a component of a class; (2) the falsification or invention of any information, including citations, on an assigned exercise; and/or (3) helping or attempting to help another in an act of cheating or plagiarism. Plagiarism is presenting the words or ideas of another person as if they were your own. Examples of plagiarism are (1) submitting an assignment as if it were one’s own work when, in fact, it is at least partly the work of another; (2) submitting a work that has been purchased or otherwise obtained from an Internet source or another source; and (3) incorporating the words or ideas of an author into one’s paper without giving the author due credit. Please read the complete policy at [http://www.sfasu.edu/policies/academic_integrity.asp](http://www.sfasu.edu/policies/academic_integrity.asp).

- **Withheld Grades Semester Grades Policy (A-54)**: Ordinarily, at the discretion of the instructor of record and with the approval of the academic chair/director, a grade of WH will be assigned only if the student cannot complete the course work because of unavoidable circumstances. Students must complete the work within one calendar year from the end of the semester in which they receive a WH, or the grade automatically becomes an F. If students register for the same course in future terms the WH will automatically become an F and will be counted as a repeated course for the purpose of computing the grade point average. The circumstances precipitating the request must have occurred after the last day in which a student could withdraw from a course. Students requesting a WH must be passing the course with a minimum projected grade of C.

- **Students with Disabilities**: To obtain disability related accommodations, alternate formats and/or auxiliary aids, students with disabilities must contact the Office of Disability Services (ODS), Human Services Building, and Room 325, 468-3004 / 468-1004 (TDD) as early as possible in the semester. Once verified, ODS will notify the course instructor and outline the accommodation and/or auxiliary aids to be provided. Failure to request services in a timely manner may delay your accommodations. For additional information, go to [http://www.sfasu.edu/disabilityservices/](http://www.sfasu.edu/disabilityservices/).

- **Acceptable Student Behavior**: Classroom behavior should not interfere with the instructor’s ability to conduct the class or the ability of other students to learn from the instructional program (see the Student Conduct Code, policy D-34.1). Unacceptable or disruptive behavior will not be tolerated. Students who disrupt the learning environment may be asked to leave class and may be subject to judicial, academic or other penalties. This prohibition applies to all instructional forums, including electronic, classroom, labs, discussion groups, field trips, etc. The instructor shall have full discretion over what behavior is appropriate/inappropriate in the classroom. Students who do not attend class regularly or who perform poorly on class projects/exams may be referred to the Early Alert Program. This program provides students with recommendations for resources or other assistance that is available to help SFA students succeed.

- **Excused Absence**: Students may be excused from attendance for reasons such as health, family emergencies, or student participation in approved university-sponsored events. However, students are responsible for notifying their instructors in advance, whenever possible, for excusable absences. Students missing classes, other than university-sponsored trips, may contact the Office of Student Rights and Responsibilities (OSRR) and request that an absence notification be sent to the instructor(s). The notification is not an excuse, and is not evaluated by OSRR. The notification is only provided as a courtesy to the student and the student’s instructor(s). Students remain responsible for providing documentation in a timely manner to the instructor for each absence. The instructor determines whether such documentation is satisfactory.

- **Dead Week**: It is possible that a major exam may be given during dead week. This serves as written notification before the 12th class day as required by Policy A-15 (Dead Week.)
Course Schedule: The following is a tentative schedule for MTH 143 for this semester. The final exam date and time is fixed!

*Per SFA policy 5.4,* for every 1 hour in class, students should be prepared to invest at least 2 hours outside of class to review notes, refer to the online textbook, practice examples, do homework/assignments, and understand homework exercises. Students should expect to dedicate this time for the full 15 weeks of instruction.

*Per SFA policy 5.4,* this schedule reflects that there is (1) an amount of student work per credit hour that reasonably approximates not less than one hour of class or direct faculty instruction and two hours of out-of-class student work per week for fifteen weeks over a long semester, or the equivalent amount of work over a different amount of time; or (2) at least an equivalent amount of work as outlined in item 1 above for other academic activities as established by the institution including laboratory work, internships, practica, studio work, and other academic work leading to the award of credit hours.

<table>
<thead>
<tr>
<th>Week</th>
<th>Lecture Note Label-Section Title-Textbook Section</th>
</tr>
</thead>
</table>
| 1    | Syllabus  
Ice-Breaker  
1.1 Graphs (Sec. 2.1)  
1.2 Functions /Graphs of Functions (Sec. 3.1/3.2) |
| 2    | 2.1 First-Degree Equations (Sec. 1.6)  
2.2 Equations of Lines (Sec. 2.2)  
2.3 Linear Models (Sec. 2.3) |
| 3    | 2.4 Applications of Linear Functions (Sec. 3.3)  
2.5 Systems of Two Linear Equations in Two Variables (Sec. 6.1) |
| 4    | 2.6 Graphing Linear Inequalities in Two Variables (Sec. 7.1)  
Catch up / Review |
| 5    | Exam 1 – Monday, September 24  
2.7 Linear Programming: The Graphical Method (Sec. 7.2) |
| 6    | 2.8 Applications of Linear Programming (Sec. 7.3)  
3.1 Basic Matrix Operations/Applications (Sec. 6.4)  
3.2 Matrix Products/Applications (Sec. 6.5) |
| 7    | 3.3 Gauss-Jordan Elimination (Sec. 6.2)  
3.4 Applications of Systems of Linear Equations (Sec. 6.3) |
| 8    | Catch up / Review  
Exam 2 – Friday, October 19 |
| 9    | 3.5 The Simplex Method: Maximization (Sec. 7.4)  
3.6 Maximization Applications (Sec. 7.5) |
| 10   | 4.1 Quadratic Equations (Sec. 1.7)  
4.2 Quadratic Functions and Applications (Sec. 3.4) |
| 11   | 5.1 Exponential Functions (Sec. 4.1)  
5.2 Applications of Exponential Functions (Sec. 4.2)  
5.3 Logarithmic Functions (Sec. 4.3)  
5.4 Logarithmic and Exponential Equations (Sec. 4.4) |
| 12   | Catch up / Review  
Exam 3 – Friday, November 16 |
| 13   | Thanksgiving Holidays |
| 14   | 6.1 Simple Interest and Discount (Sec. 5.1)  
6.2 Compound Interest (Sec. 5.2)  
6.3 Annuities, Future Value, and Sinking Funds (Sec. 5.3)  
6.4 Annuities, Present Value, and Amortization (Sec. 5.4) |
| 15   | Review |
| 16   | Final Exam: Wednesday, December 12, 10:30a.m. – 12:30p.m. in our classroom |