MTH 144 Elements of Calculus with Applications for Business
Syllabus and Course Policy Sheet
Spring, 2020

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Class meeting time and room: Section .001: MWF 12:00 PM – 12:50 PM, MATH 204

Office Hours: MW: 1:00 PM – 2:00 PM, TR: 12:30 PM – 2:00 PM

Required Materials
Book: Mathematical Applications for the Management, Life, and Social Sciences, by Harshbarger & Reynolds, Tenth Edition (note: the local bookstores will not carry this textbook; look online).
ISBN-10: 1133106234

Calculator: Graphing calculators and symbolic calculators (those that can differentiate or integrate) are NOT allowed for quizzes or exams. Basic or scientific calculators are allowed on all work. I recommend the TI-30XS Multiview (retail price under $20) or similar. Make sure that you do NOT buy the Casio fx-115ES

Course Description
For a detailed course description, see www2.sfasu.edu/math/courses/syllabi/MTH144Syllabus.pdf

Student Learning Outcomes
For a detailed list of student learning outcomes, see www2.sfasu.edu/math/courses/syllabi/MTH144Syllabus.pdf

Grading Policy

<table>
<thead>
<tr>
<th>%</th>
<th>Activity</th>
<th>Grading Scale</th>
<th>Test Dates (tentative)</th>
</tr>
</thead>
<tbody>
<tr>
<td>20%</td>
<td>Quizzes</td>
<td>90% - 100%</td>
<td>A</td>
</tr>
<tr>
<td>60%</td>
<td>Tests (4 @ 15% each)</td>
<td>80% - 90%</td>
<td>B</td>
</tr>
<tr>
<td>20%</td>
<td>Comprehensive Final Exam</td>
<td>70% - 80%</td>
<td>C</td>
</tr>
<tr>
<td>100%</td>
<td>Final Course Grade</td>
<td>60% - 70%</td>
<td>D</td>
</tr>
<tr>
<td></td>
<td></td>
<td>0% - 60%</td>
<td>F</td>
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Final Exam

• The final exam for this course will be given as scheduled on the university calendar, in our normal classroom. No alternate arrangements will be allowed.

Tutoring

• Visit the AARC (on the first floor of the library) to inquire about tutor support for MTH 144. For the Spring 2020 semester, the hours of operations for the walk-in tutoring tables are 1:00 PM – 8:00 PM, Monday through Thursday, and 3:00 PM – 7:00 PM on Sunday.

• Weekly Appointments and Learning Teams: For more focused, course-specific tutoring, the AARC offers weekly one-on-one appointments and Learning Teams. A Learning Team is a group of 3-4 students from the same course who are coached by a peer tutor (a fellow student). These are student-led groups, so the students choose the topics covered. If you are interested in either one-on-one weekly appointments, or in forming a Learning Team, visit the AARC during the first Open Enrollment period, January 22nd and 23rd
General Policies and Information

- At the beginning of class, you are encouraged to ask questions on material.
- I will send messages to the entire class during the semester, often through the D2L news feed. Make sure you have your personal D2L settings set to forward notifications. You may also text me via the Remind app.
- Students are expected to respect the learning environment of their fellow students. Students who disrupt this environment will be asked to leave.
- Bring your calculator to class every day, it will be useful.

Testing, Grading, and Make-up Policies

- Quizzes comprise 20% of a student’s grade, and will be given on a roughly weekly basis. The questions on the quizzes will come directly from the suggested textbook exercises. Students may not use their textbook during a quiz, but may use notes and pre-completed textbook problems. To maximize your quiz average, complete the textbook problems beforehand, getting help if needed.
- If a student misses a test and has a valid excuse (validity of excuses are left to the discretion of the instructor), the student’s missed test grade will be replaced by his/her final exam grade. If more than one exam is missed, the final exam grade will replace only one of the missed exams.
- Tentative exam dates are given on the course calendar. After students have started the exam, they may not leave the classroom until the exam is complete (use the restroom if needed before you start the exam). Scratch paper will be provided, and students may use an approved calculator on the exam, but not a phone calculator, etc.
- You must bring and display either your SFASU Student ID or a valid driver’s license before you will be permitted to take each test and the final exam. I must be able to recognize you from the photo on the ID.
- Since you have a full semester to arrange any travel plans, they are not an excuse for missing the final.
- Students are expected to attend every class meeting, arriving on time. If you must miss class, it is your responsibility to get notes from a classmate or the instructor.
- Student attendance is recorded daily. While not directly part of your grade, attendance percentage will be considered for borderline grade cases.

How to succeed in MTH 144

- The number #1 obstacle to student success in this class is weak knowledge of algebra. It is imperative that you have strong algebra skills in order to work through calculus problems. Take time to review the basic algebra concepts in Chapters 0-2 in the textbook, especially if you haven’t taken algebra in a long time.
- Calculus problems are often long, and can be quite tedious. You’ll need patience and perseverance to work through the problems.
- Take the time to read the book and review your notes before and after class.
- Practice homework problems until you can do it without referring to examples or help from your notes. Bonus: doing the homework in advance will also help your quiz grades, which account for 20% of your overall course grades.
- You want the best possible quiz average you can get, this will remove some of the pressure on the exams.
- Form a Learning Team, or at least a more informal group. You don’t truly understand a concept until you can explain it clearly to a classmate. Study groups are an excellent way to help you reach this level. Plus, being in a study group will help keep you accountable with regards to keeping up with class material.
- Have someone check your work after you have finished it to help eliminate mistakes that you do not know you are making. This is another benefit of Learning Teams.
- Let go of the mentality whereby you only focus on the course when an exam is approaching. You need to always be studying, always preparing. That’s a big commitment, but if you try it you’ll find that the exams are easier, your grades are better, and new concepts will come more quickly.
• Treat mistakes as a learning experience. Math is not easy. You **will** encounter difficulty. You **will** score a grade that you’re not happy with. **Push through it.** Success awaits you on the other side.

**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/).

**Definition of Credit Hour (Policy 5.4)**
The following is an excerpt from SFA Policy 5.4:

*The federal definition of a credit hour is an amount of work represented in intended learning outcomes and verified by evidence of student achievement that is an institutionally established equivalency that reasonably approximates:*

1. **Not less than one hour of classroom or direct faculty instruction and a minimum of two hours out-of-class student work each week for approximately fifteen weeks for one semester or trimester hour of credit, or 10 to 12 weeks for one quarter hour of credit, 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.**

To this end, all students in courses offered by the Department of Mathematics and Statistics that wish to be successful should plan to spend a minimum of two hours outside of class for every credit hour associated with this course. Expected activities to be completed in the time outside of class include reviewing notes from previous
class meetings, reading assigned course resources, completing all assigned exercises and projects, and performing periodic assessment preparation.

<table>
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<tr>
<th>Tentative Course Schedule (MTH 144 202 MWF)</th>
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<td><strong>Week of . . .</strong></td>
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| 1/13 – 1/17 | Algebra Review  
9.1 Limits  
9.2 Continuous Functions | 9.1 p. 553: 1-9 odd, 15-37 odd, 49-61 odd  
9.2 p. 564: 1-15 odd, 25-31 odd, 39, 41, 45, 47 |
| 1/20 – 1/24 | 9.3 Rates of Change  
9.4 Derivative Formulas | 9.3 p. 577: 1-17 odd, 27-31 odd, 35, 37, 41, 45, 53  
9.4 p. 588: 1-33 odd, 47-55 odd |
| 1/27 – 1/31 | 9.5 Product and Quotient Rule  
9.6 Chain Rule  
9.7 Derivative Formulas  
9.8 Higher Order Derivatives | 9.5 p. 596: 1-25 odd, 39-43 odd  
9.6 p. 603: 1-29 odd, 35, 39, 41  
9.7 p. 610: 1-31 odd, 37, 41, 43  
9.8 p. 615: 1-25 odd, 35, 39, 41 |
| 2/3 – 2/7 | 9.8 Higher Order Derivatives  
Review/Extra Instruction  
Exam 1: Friday, Feb 7th | |
| 2/10 – 2/14 | 11.1 Derivatives of Logarithmic Functions  
11.2 Derivatives of Exponential Functions | 11.1 p. 708: 1-37 odd, 43, 45  
11.2 p. 714: 1-35 odd, 47, 51, 53 |
| 2/17 – 2/21 | 11.3 Implicit Differentiation  
11.4 Related Rates  
14.1 Multivariable Expressions | 11.3 p. 724: 1-43 odd, 47, 55, 57  
11.4 p. 730: 1-15 odd, 17, 19, 31, 33, 37  
14.1 p. 876: 1-21 odd |
| 2/24 – 2/28 | 14.2 Partial Differentiation  
Review/Extra Instruction  
Exam 2: Friday, Feb 28th | 14.2 p. 885: 1-17 odd |
| 3/2 – 3/6 | 9.9 Applications  
10.1 Maxima and Minima  
10.2 Concavity and Second Derivative Test | 9.9 p. 624: 1-21 odd, 25, 27  
10.1 p. 647: 1-35 odd, 47, 51, 53  
10.2 p. 660: 1-23 odd, 27, 31 |
| 3/9 – 3/13 | **Spring Break** | |
| 3/16 – 3/20 | 10.3 Optimization Problems  
10.4 Optimization/ Applications to Business  
10.5 Rational Functions | 10.3 p. 671: 1-19 odd, 25, 27, 29, 33, 35, 37  
10.4 p. 680: 3, 5, 11, 15, 17, 19, 21, 27, 29, 31  
10.5 p. 689: 1-19 odd, 25, 27, 35 |
| 3/23 – 3/27 | Review/Extra Instruction  
Exam 3: Wed, March 25th  
12.1 Indefinite Integrals  
12.2 The Power Rule | 12.1 p. 753: 1-29 odd, 41, 43, 47  
12.2 p. 762: 1-33 odd, 43 |
| 3/30 – 4/3 | 12.3 Integrals of Expo/Log Functions  
12.4 Applications of Integrals  
12.5 Differential Equations | 12.3 p. 771: 1-27 odd, 43, 49  
12.4 p. 780: 1-11 odd  
12.5 p. 788: 1-27 odd, 39, 41 |
| 4/6 – 4/10 | Review/Extra Instruction  
Exam 4: Wed, April 8th  
Easter Holiday Begins Thurs, April 9th | |
| 4/13 – 4/17 | 13.1 Integrals and Area  
13.2 Definite Integrals/Fund. Theorem | 13.1 p. 806: 1-7 odd, 15-25 odd  
13.2 p. 816: 1-43 odd, 57 |
| 4/20 – 4/24 | 13.3 Areas between curves  
13.5 Tables of Integrals | 13.3 p. 825: 1-31 odd, 37  
13.5 p. 840: 1-13 odd, 17-23 odd |
| 4/27 – 5/1 | 13.7 Improper Integrals | 13.7 p. 852: 1-9 odd, 21 |
| **Finals Week** | **MTH 144.001 Final Exam: Monday, May 4th 1:30 pm – 4:00 pm** |