INSTRUCTOR: Anna Durakiewicz
OFFICE: Room 623 G
CONTACT: Office: 505-662-0344
e-mail: adurakie@unm.edu (preferred)
web: http://www.unm.edu/~adurakie/

MEETING TIMES: M,W 8:30-9.45 AM

LIVE OFFICE HOURS: MW 9:45-10:45 AM, unless I am required to be at a meeting. At other times, please stop by or call for appointment.

Table of Contents
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THE UNIVERSITY OF NEW MEXICO - LOS ALAMOS
COURSE SYLLABUS

Catalog Description
In-depth study of polynomial, rational, exponential and logarithmic functions and their graphs. Includes the fundamental theorem of algebra, systems of equations, conic sections, parametric equations and applications in geometry. Exploration of the graphing calculator. Prerequisite: C (not C-) or better in Math 121 or fulfillment of departmental placement requirements. Corerequisite: Math 123.

OFFICE HOURS
UNM–Los Alamos: MW 9:45-11:45 am unless I am required to be at a meeting.

INSTRUCTOR
Your instructor is Anna Durakiewicz. To contact me about this course, you may email me at adurakie@unm.edu (this is the preferred method), phone me at 505-662-0344, or at home at 505 672 9516. I will try to respond to any email message within 24 hours (usually quicker) except on weekends. If you have an issue that needs a quick response time, please give me a call.

I will be sending messages from time to time using the announcement and email within MyMathLab. This will be sent to the same email you use to register in MyMathLab. Be sure to register using the email address you use/check frequently when registering for our course in MyMathLab.

TEXT BOOK

Course ID: durakiewicz84694

To register see the last page of this syllabus or go to MyMathLab at: http://www.coursecompass.com
Go to “How to Register” under STUDENTS title, or go to http://www.coursecompass.com/html/student_how_to_register.html

ASSESSMENT
UNM-Los Alamos conducts ongoing assessments of student learning so that we can continue to improve the curriculum to give students the best education possible. The data collected for this assessment will be selected by the instructor and may come from exams, projects or other assignments. The assessment will focus on the learning outcomes listed in this syllabus. The data from this assessment will be collected and reported anonymously. Data summaries will be reported to the department, to the Office of Instruction, and posted on the web. The information collected will be used to make improvements to curriculum and teaching. This assessment is not a reflection of your grade and is not a grading exercise; it is simply an evaluation of how well students are mastering certain skills.

Course Objectives

1. Communication: Students will use proper mathematical notation and terminology to communicate mathematical phrases. Students will properly interpret graphs. (HED Area II Mathematics, Algebra Competency # 3)
2. Working with exponential and logarithmic functions: Students will solve exponential and logarithmic equations, graph exponential and logarithmic functions and determine proper overall behavior for the graphs. Students will apply this knowledge when examining real world problems of exponential growth and decay. (HED Area II Mathematics, Algebra Competency # 1,2,3, & 4)
3. Analytical Geometry: Students will identify and graph conic sections. Students will graph and apply algebraic tools with parametric equations. (HED Area II Mathematics, Algebra Competency # 4)
4. Systems of equations: Students will solve systems of equations using various methods. They will apply this knowledge to real world problems.
5. Sequences and Series: Students will learn to use series and sequences. Students will also use mathematical induction to prove formulas and use the Binomial Theorem to calculate binomial coefficients.
6. Counting Principles and Probability: Students will use the Fundamental Counting Principle. Students will find the probability of the events using adequate properties of probability.

Learning Outcomes:

At the conclusion of the course, the student should be able to:

Course Objective # 1 Communication
1. Use proper mathematical notation and terminology to communicate mathematical phrases.
2. Read and interpret graphs.

Course Objective # 2 Functions
3. Apply the Fundamental Theorem of Algebra.
4. Graph functions; this includes power, root, reciprocal, and piecewise defined functions.
5. Find and simplify a difference quotient and know it represents a rate of change (slope).
6. Calculate an average rate of change of a function and to interpret its meaning.
7. Find limits of a function numerically, graphically and algebraically.
8. Find derivative of a function.
9. Recognize slope of the curve to be a slope of the tangent line
10. Solve exponential and logarithmic equations.
11. Graph exponential and logarithmic functions and determine overall behavior for the graphs.
12. Understand inverse relationship between logarithmic and exponential functions and use this relationship to find their graphs.
13. Use exponential and logarithmic functions to solve real world problems of exponential growth and decay.

Course Objective # 3 Analytic Geometry
14. Graph equations of conic sections and apply knowledge of conics to solve application problems.
15. To graph simple parametric equations both by hand and by graphing utility, and how to eliminate the parameter.

Course Objective # 4 Systems of equations
17. Perform the matrix operations of addition, scalar multiplication, and matrix multiplication.
18. Find the inverse of a square matrix, if it exists.
19. Find the determinant of a 2X2 matrix and a 3X3 matrix by hand.
20. Use a calculator to do matrix operations, including row operations, and to find determinants of square matrices.

Course Objective # 5 Sequences and Series
21. Recognize arithmetic and geometric sequences and series.
22. Find nth terms of arithmetic and geometric sequences.
23. Find sequences of partial sums of arithmetic and geometric series.
24. Understand and do some proofs by mathematical induction.
25. Understand and use the binomial theorem.

Course Objective # 6 Counting Principles and Probability
26. Use the formulas for permutations, combinations and distinguishable permutations.
27. Use the Additive Rule for finding probabilities
28. Find the probability of the exclusive event or complement of an event.

Special Topics
29. Review of Trig as needed
30. Review of Polar Coordinates and Complex numbers as needed

Technical and Academic Support
Students may contact the UNM-LA Academic Support Center for help or tutoring in their coursework. See the ASC website at http://asc.unm.edu. Any questions related to course organization or requirements should be directed to the instructor.

Technical support is available at these sources:
- Phone: (505) 277-5757 (M-F 8:00 am – 5:00 pm) – IT and WebCT support on main campus.
- UNM Fast Info: http://fastinfo.unm.edu (UNM searchable knowledge base)
UNM-LA IT support: go to http://www.la.unm.edu/administration/ITS/computer_services.html or email unmla-itsupport@unm.edu
Please use [How to get help?] button in MyMathLab for more details.

ATTENDANCE
You are expected to attend all classes. If there are unusual extenuating circumstances, please discuss them with the instructor before the fourth absence to avoid instructor withdrawal. For each missed class the student will need to complete the quiz that contains questions from the missing material.

Drop Policy
If students decide to drop the class, it is their responsibility to do so; they should be aware of University-wide posted deadlines for tuition refunds and mandatory assignment of grades. Students should not assume that the instructor will drop them before a deadline if they simply stop attending a live class or logging in to an online class.

Dropping a course may affect students’ financial aid status and/or tuition refund. A drop will result in a W. Students who do not officially drop the class will receive the grade earned based on the syllabus grading criteria, which may be an F.

Unexpected Class Cancellation
Due to difficulties in informing students in advance of a teacher’s illness or emergency, students who arrive for class and find the teacher isn’t there should wait 15 minutes (just in case he or she is simply late). After 15
minutes, students should go to building 1 to the front desk to seek information (Los Alamos) or to their corresponding on-site contact for other locations (provide). If there is no information, students should assume that class has been canceled for the day and are free to leave. When possible, the instructor will call or email students to let them know of a canceled class meeting.

**HOMEWORK**

Your homework is your most important effort in this class; homework is how you actually learn the material that will be on the quizzes and exams. Expect to do 2-3 hours of homework for every hour of class meeting time (on average 10-15 hours per week). Keep all of your homework notes together in a folder so that if you are having trouble in the course, you can bring it with you when you go to see your instructor or get tutoring. Homework assignments will be completed within MyMathLab. This homework is 25% of your grade. Homework problems can be re-worked if you are not happy with your score. The homework has due dates for each assignment, but you may continue to work on the homework past the official due date with 10% penalty. Although the homework assignments will never be closed to you, allowing you to complete these assignments at any time, if you do not stay up to date, you will likely be unable to complete the course in a satisfactory manner. All the homework assignments are closed at the last day of instruction.

You can expect quizzes over homework, in-class exercises, and group work as well. Be sure to show all of your work in your homework journal. The process is just as important as the answer. For any work done on paper, including all in-class work, **ANSWERS ONLY WILL RECEIVE NO CREDIT!!!**

**QUIZZES**

Quizzes may be given in class from time-to-time. Sometimes these will be closed book quizzes, and sometimes they will take the form of a graded group exercise or worksheet. We will try to have one per week. If helpful will be allowed to use your journal as reference, so please remember to write assignment numbers, problem numbers and show your work in your journals for use during these quizzes and group exercises.

**CHAPTER TESTS**

Tests should be taken on time with the class. If you have an unavoidable conflict, you must make arrangements with me before you miss a planned test. If you do not let me know ahead of time that you will miss a test, you may not be allowed to make it up. Being unprepared is not a reason to miss a test. You may retake any of the tests you wish for a maximum score of 75%. However, in order to retake a test, you must request access to a new test from your instructor. This will be entirely up to you; I will probably not remind you of this option again. All retakes must be completed before the final exam.

**MAKE-UP POLICY**

The homework has due dates for each assignment, but you may continue to work on the homework past the official due date with 10% penalty. If you took the test in time and scored less than 75% you may retake the test, before the next test is given. The maximum score for the retake test would be 75%.

**FINAL EXAM**

There will be a comprehensive final exam given during the last week of the semester in December. It will contribute 20% to your final grade. **In order to pass this course you need to score at least 60% from your final exam.**

**GRADES**

Your final grade will be calculated by using the following formula:
The following letter grades will be assigned to you at the end of the semester according to your average:

<table>
<thead>
<tr>
<th>Grade</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>A+</td>
<td>99–100</td>
</tr>
<tr>
<td>A</td>
<td>94–98</td>
</tr>
<tr>
<td>A–</td>
<td>90–93</td>
</tr>
<tr>
<td>B+</td>
<td>87–89</td>
</tr>
<tr>
<td>B</td>
<td>84–86</td>
</tr>
<tr>
<td>B–</td>
<td>80–83</td>
</tr>
<tr>
<td>C+</td>
<td>77–79</td>
</tr>
<tr>
<td>C</td>
<td>74–76</td>
</tr>
<tr>
<td>C–</td>
<td>70–73</td>
</tr>
<tr>
<td>D+</td>
<td>67–69</td>
</tr>
<tr>
<td>D</td>
<td>64–66</td>
</tr>
<tr>
<td>D–</td>
<td>60–63</td>
</tr>
<tr>
<td>F</td>
<td>Below 60</td>
</tr>
</tbody>
</table>

### CHEATING

Each student is expected to maintain the highest standards of honesty and integrity in academic and professional matters. The University reserves the right to take disciplinary action, including dismissal, against any student who is found responsible for academic dishonesty. Any student who has been judged to have engaged in academic dishonesty in course work may receive a reduced or failing grade for the work in question and/or for the course.

Academic dishonesty includes, but is not limited to, dishonesty on quizzes, tests or assignments; claiming credit for work not done or done by others; and hindering the academic work of other students.

Cheating will not be tolerated. Do not do homework, quizzes or tests for another student, and do not ask anyone else to do your work for you. You may certainly work together or get help on homework, but you should complete your own work. Each instance of cheating will be dealt with on an individual basis with consequences that are appropriate.

### COMPUTER ACCOUNT POLICY

All students are required to have a UNM campus account (NetID). Students will use this account to register for classes through MyUNM, [http://my.unm.edu](http://my.unm.edu). This account is also used to read and send email (the UNM e-mail address looks like NetID@unm.edu), print transcripts, check financial status, and check degree progress.

Students are required to check their UNM email periodically, as this is the main communication method used by the university. Students may visit [http://it.unm.edu/howtos/504.html](http://it.unm.edu/howtos/504.html) for simple instructions on how to forward their UNM email to a different email address.

Students can access MyUNM by clicking on the “My UNM” link on either the UNM–Los Alamos web page ([http://www.la.unm.edu](http://www.la.unm.edu)) or the main campus web page ([http://www.unm.edu](http://www.unm.edu)), or by typing in the web address [http://my.unm.edu](http://my.unm.edu). Students must then login using their NetID and password.

From the UNM-LA campus, students can access MyUNM from public computers, from computers in computer labs, and from computers in the library. If students wish to use their own computers, they can connect to one of the UNM-LA Wireless networks. Instructions for accessing these are given here: [http://www.la.unm.edu/Wireless/](http://www.la.unm.edu/Wireless/).

Students should be aware of the computer use policies as they affect any aspect of their education at UNM-LA. See Computer Use Policy links on this page: [http://www.la.unm.edu/administration/ITS/computer_services.html](http://www.la.unm.edu/administration/ITS/computer_services.html).

### COURSE EMAIL POLICY

I will generally be using the email address you enter into MyMathLab. Often, I will email corrections to your quizzes and tests. If you would like for me to return your papers to you in a more secure fashion, please let me

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Homework     25%
Quizzes, Discussions   10%
Tests      45%
Final Exam     20%
know. Be sure to use an email address that you will be checking often, and to which no one else has access. Students should allow the instructor 24 hours on weekdays and 48 hours on weekends to respond to email messages or phone calls. Students who receive emails from instructors should attempt to reply within 24 hours.

**AMERICAN DISABILITIES ACT**

“In accordance with University Policy 2310 and the American Disabilities Act (ADA), reasonable academic accommodations may be made for any qualified student who notifies the instructor of the need for an accommodation. It is imperative that you take the initiative to bring such needs to the instructor's attention, as the instructor is not legally permitted to inquire. The student is responsible for demonstrating the need for an academic adjustment by providing Student Services with complete and appropriate current documentation that establishes the disability, and the need for and appropriateness of the requested adjustment(s). However, students with disabilities are still required to adhere to all University policies, including policies concerning conduct and performance. Students who may require assistance in emergency evacuations should contact the instructor as to the most appropriate procedures to follow. Contact Accessibility Services at 505-661-4692 for additional information.”.

**NEEDED SUPPLIES**

You will need the following to successfully complete this course:

- Computer and printer
- MyMathLab access
- Book (optional if you choose to use the e-book)
- Pencil & eraser for homework
- Spiral notebook to use as a homework notebook
- Spiral notebook to use for note taking
- Scientific Calculator

**COURSE EVALUATION**

Students will be requested to participate in a course evaluation near the end of the course. UNM-LA requests that all students participate, because the information they provide is helpful in improving courses for future students.

**PARTING COMMENTS**

My wish is for every one of you to be successful in this course. To work toward that end, I will do everything within my power to help you. Don't hesitate to ask for help. I am willing to help you at any time that I am available. I ask for your commitment to do everything you can to complete the course successfully. Remember you will receive the grade that you earn! GOOD LUCK!

Congratulations for making it all the way to the end of this syllabus. If you have any questions or issues send Anna Durakiewicz an email at adurakie@unm.edu The next pages contain the schedule of topics and due dates.
# Math 150

## Tentative Schedule of Topics*

<table>
<thead>
<tr>
<th>WEEK</th>
<th>Lecture DATE</th>
<th>MATERIAL TO BE COVERED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Week 1</td>
<td>Aug 20</td>
<td>Introduction, Chapter 5.1 topics</td>
</tr>
<tr>
<td></td>
<td>Aug 23</td>
<td>Chapter 5.2-5-3</td>
</tr>
<tr>
<td>Week 2</td>
<td>Aug 27</td>
<td>Chapter 5.4-5-5</td>
</tr>
<tr>
<td></td>
<td>Aug 29</td>
<td>Chapter 5.6. Revision Ch 5</td>
</tr>
<tr>
<td>Week 3</td>
<td>Sept 3</td>
<td>Labor Day holiday</td>
</tr>
<tr>
<td></td>
<td>Sept 5</td>
<td>Test 1</td>
</tr>
<tr>
<td>Week 4</td>
<td>Sept 10</td>
<td>Chapter 6.1</td>
</tr>
<tr>
<td></td>
<td>Sept 12</td>
<td>Chapter 6.2</td>
</tr>
<tr>
<td>Week 5</td>
<td>Sept 17</td>
<td>Chapter 6.3</td>
</tr>
<tr>
<td></td>
<td>Sept 19</td>
<td>Chapter 6.4</td>
</tr>
<tr>
<td>Week 6</td>
<td>Sept 24</td>
<td>Review Ch 6</td>
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<tr>
<td></td>
<td>Sept 26</td>
<td>Test 2</td>
</tr>
<tr>
<td>Week 7</td>
<td>Oct 1</td>
<td>Chapter 7.1-7.2</td>
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<tr>
<td></td>
<td>Oct 3</td>
<td>Chapter 7.3</td>
</tr>
<tr>
<td>Week 8</td>
<td>Oct 8</td>
<td>Columbus Day</td>
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<tr>
<td></td>
<td>Oct 10</td>
<td>Chapter 7.4-7.5</td>
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<tr>
<td>Week 9</td>
<td>Oct 15</td>
<td>Chapter 7.6 -7.7</td>
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<tr>
<td></td>
<td>Oct 17</td>
<td>Chapter 7.8</td>
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<tr>
<td>Week 10</td>
<td>Oct 22</td>
<td>Revision Ch 7</td>
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<tr>
<td></td>
<td>Oct 24</td>
<td>Test 3</td>
</tr>
<tr>
<td>Week 11</td>
<td>Oct 29</td>
<td>Chapter 11.1-11.2</td>
</tr>
<tr>
<td></td>
<td>Oct 31</td>
<td>Chapter 11.3</td>
</tr>
<tr>
<td>Week 12</td>
<td>Nov 5</td>
<td>Chapter 11.5-11.6</td>
</tr>
<tr>
<td></td>
<td>Nov 7</td>
<td>Revision Ch 11</td>
</tr>
<tr>
<td>Week 13</td>
<td>Nov 12</td>
<td>Veterans Day</td>
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<tr>
<td></td>
<td>Nov 14</td>
<td>Test 4</td>
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<tr>
<td>Week 14</td>
<td>Nov 19</td>
<td>Chapter 12.1 - 12.2</td>
</tr>
<tr>
<td></td>
<td>Nov 21</td>
<td>Chapter 12.3 – 12.3</td>
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<tr>
<td>Week 15</td>
<td>Nov 26</td>
<td>Review Ch 12</td>
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<tr>
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<td>Nov 28</td>
<td>Test 5</td>
</tr>
<tr>
<td>Week 16</td>
<td>Dec 3</td>
<td>Review for Final Exam</td>
</tr>
<tr>
<td></td>
<td>Dec 5</td>
<td>Review for Final Exam</td>
</tr>
</tbody>
</table>

*Final Exam will be given Dec 10.*
Welcome Students!

MyMathLab is an interactive website where you can:

- Self-test & work through practice exercises with step-by-step help to improve your math skills.
- Study more efficiently with a personalized study plan and exercises that match your book.
- Get help when YOU need it. MyMathLab includes multimedia learning aids, videos, animations, and live tutorial help.

Before You Begin:
To register for MyMathLab you will need:

- A MyMathLab student access code (packaged with your new text, standalone at your bookstore, available at UNMLA Bookstore, or available for purchase with a major credit card at www.coursecompass.com)
- Your instructors’ Course ID number:__ durakiewicz84694 (no space between my name & the number)________________
- Your school’s zip code: _____87544________
- A valid email address

Student Registration:
- Go to http://www.coursecompass.com and click the Register button under Students.
- Review the Before You Start information to ensure you have everything you need to register; click Next.
- On the Course ID page:
  - Enter the Course ID and click on Find Course
  - Choose your enrollment method
    - If your student access code came packaged with your textbook, select Access Code.
      (Select “Buy Now” to purchase online access using your credit card)
    - Enter your student access code as displayed; use the tab key to move from box to box and use all CAPITAL LETTERS when entering the access code. Click Next.
  - Please read all information in the License Agreement and Privacy Policy. Click on Accept if you agree to the terms.
- On the Access Information screen:
  - If you have registered for other Pearson online products and already have a login name and password, select Yes. Boxes will appear for you to enter your login information.
  - If this is the first time you have registered for a Pearson online product, select No. Boxes will appear for you to enter your desired login name and password. You may want to use your email address as your login name. If you do not use your email address, be prepared with a second login name choice if the one you first selected is already in use. Your login name must be at least 4 characters and cannot be the same as your password.
  - If you aren’t sure whether you have a Pearson account or not, select Not Sure. Enter your email address and click Search. If you have an account, your login information will be sent to your email address within a few moments. Change your selection to Yes, and enter your login name and password as directed.
  - On the Account Information page, enter your first and last name and email address. Re-type your email address to make sure it is correct.
  - In the School Location section, select United States from the School Country drop-down menu. Enter your school’s zip code, and then select your school from the drop-down list.
  - Select a security question and answer to ensure the privacy of your account. Click Next.
  - When your registration process is complete you will see a confirmation screen. Click Log In Now to reach CourseCompass, and click Log In. Enter your login name and password and click Log In.

Logging In:
- Go to www.coursecompass.com and click on Log In. Enter your login name and password and click Log In.
- On the MyCourseCompass page, click on the course name to enter your instructor’s course.
- The first time you enter your course from your own computer and anytime you use a new computer click the Installation Wizard on the announcements page or navigational button at the bottom left of the screen. The wizard (or Browser Check) will detect and then help you install the plug-ins and players you need to access the math exercises and multimedia content in your MyMathLab course. Follow the screen instructions to complete this process. NOTE: Check with your instructor to ensure all plug-ins are installed in the college computer labs.
- After completing the installation process and closing the wizard you will be on your course home page and ready to begin exploring your MyMathLab course.

Need help? Contact Product Support at http://www.mymathlab.com/contactus.htm for live CHAT, email or phone support; 1-800-677-6337