

Lake Tahoe Community College
MAT 154 – Intermediate Algebra
M, W 6:10 – 8:00 am HSST3
Spring 2006

Instructor: Janine Bouyssounouse

Office Info: home: (530) 544-4119

Course Description: This course is a continuation of MAT 152B and is an introduction to the definition of a function and its inverse, solving quadratic equations and systems of equations, exponential and logarithmic functions, sequences and series, and conic sections.

Required Text: Elementary and Intermediate Algebra 2nd ed by Mark Dugopolski

Calculator: You will need a scientific calculator for this course. It should have a log key and an exponent key. Graphing calculators are not allowed.

Prerequisite: Completion of MAT 152B with a grade of “C” or better or equivalent or appropriate skills demonstrated through the math assessment process.

Student Learning Outcomes

- 1) Exhibiting a proficiency in the topics covered in the course.
- 2) Engaging in logical and critical thinking.
- 3) Reading technical information.
- 4) Demonstrating the solution to problems by translating written language into Mathematical statements, interpreting information, sketching relevant diagrams, analyzing given information, formulating appropriate math statements, and checking and verifying results.

Grading Scale:

| | | | |
|----------|---------------|------------------|------------|
| A | 90-100% | Tests: | 40% |
| B | 80-89% | Quizzes: | 20% |
| C | 70-79% | Homework: | 15% |
| D | 60-69% | Final: | 25% |
| F | Less than 60% | | |

Grades will be posted online at www.mygradebook.com. Login IDs and passwords will be distributed the first week of class.

Tests: There will be at least 4 tests, usually occurring on Wednesdays.

Quizzes: There will be at least 4 quizzes, usually occurring on Wednesdays. There will be no make-ups for quizzes. *The lowest quiz grade will be dropped.*

Make-Up Policy: There are no make-ups for quizzes; however one quiz will be dropped. Make-ups for tests may have a 10% penalty if taken after the actual test date. Students must contact the instructor in advance to arrange to take the make-up test.

Homework: Homework will be collected on the day of the quiz or test. **The last day to turn in homework for Mat 154 is Wednesday, June 14.** *No homework will be accepted on the day of the final.* Completing homework before quizzes and tests will provide practice and may make tests and quizzes seem easier than if the homework was not completed before the quizzes or tests.

Final: A comprehensive final exam will be given on **Monday, June 19, 6:00 pm in HSST3.**

Attendance: Regular attendance in class is an obligation assumed by every student at the time of his/her registration. Students will still be responsible for the work missed because of their absence. Homework questions will be answered in class. This can be very helpful in understanding the material, as well as preparing for quizzes and tests. Please familiarize yourself with the sections to be covered in class before attending class.

The **Gateway Math Center (G5)** has free tutoring for all registered students. They are open Monday through Saturday. The hours change each quarter, so please check the hours of operation. Please Log In and Out so that the facility gets the funds it needs.

Any students needing accommodations should inform the instructor.

Students with disabilities who may need accommodations for this class are encouraged to notify the instructor and contact the Disability Resource Center (DRC) early in the quarter so that reasonable accommodations may be implemented as soon as possible. Students may contact the DRC by visiting the Center (located in room A205) or by phoning 541-4660, ext. 249 (voice) or 542-1870 (TTY for deaf students). All information will remain confidential.

How to Succeed in a Math Class:

1. Come to every class meeting.
2. Arrive early, get yourself settled and be ready when class starts. Sit where you won't be distracted.
3. Read each section before it is discussed in class.
4. Do all of the homework.
5. Do some math every day.
6. Start preparing for tests at least a week in advance.
7. Take advantage of tutors and office hours, extra help can make a big difference.
8. Do some review every time you study math.

Tentative Schedule:

| Date | Sections/Quizzes/Tests |
|----------------|---|
| Monday 4/3 | Greetings, Syllabus, 10.3, 10.4 |
| Wednesday 4/5 | 10.5, Quiz #1 (10.3, 10.4), Homework Due (10.3, 10.4) |
| Monday 4/10 | 11.1, 11.2 |
| Wednesday 4/12 | 11.3, Test #1 (10.3-11.2), Homework Due (10.5-11.2) |
| Monday 4/17 | 11.6, 11.7 |
| Wednesday 4/19 | 12.1, Quiz #2 (11.3, 11.6, 11.7), Homework Due (11.3, 11.6, 11.7) |
| Monday 4/25 | 12.2, 12.3 |
| Wednesday 4/27 | 12.4, Test #2 (11.3-12.3), Homework Due (12.1-12.3) |

| Date | Sections/Quizzes/Tests |
|----------------|---|
| Monday 5/1 | 7.3 |
| Wednesday 5/3 | 13.1, Quiz #3 (12.4, 7.3), Homework Due (12.4, 7.3) |
| Monday 5/8 | 13.2 |
| Wednesday 5/10 | 13.3, Test #3 (12.4, 7.3, 13.1, 13.2), Homework Due (13.1, 13.2) |
| Monday 5/15 | 13.4 |
| Wednesday 5/17 | 13.5, Quiz #4 (13.3, 13.4), Homework Due (13.3, 13.4) |
| Monday 5/22 | 14.1 |
| Wednesday 5/24 | 14.2, Test #4 (13.3-14.1), Homework Due (13.5, 14.1) |
| Monday 5/29 | No Class – Holiday |
| Wednesday 5/31 | 14.3 Last Day to Drop 6/2 |
| Monday 6/5 | 14.4 |
| Wednesday 6/7 | 14.5, Quiz #5 (14.2-14.4), Homework Due (14.2-14.4) |
| Monday 6/12 | Review |
| Wednesday 6/14 | Continue Review, Last Homework Due Date (14.5) |
| Monday 6/19 | Final Exam for Mat 154 (7.3, 10.3-14.5, except sections not covered on syllabus) |

Tentative Assignments:

| Sec. | Section Title | Homework Problems to Complete |
|------|---|--|
| 10.3 | Graphing Parabolas | 1-7, 9, 11-57 every other odd, 59, 61 |
| 10.4 | More on Quadratic Equations | 1, 3, 5-79 every other odd, 81 |
| 10.5 | Quadratic and Rational Inequalities | 5-79 every other odd |
| 11.1 | Functions & Relations | 3-6, 7-10, 15-39 odd, 69-74, 75-101 odd |
| 11.2 | Graphs of Functions and Relations | 1-6, 7-65 every other odd |
| 11.6 | Combining Functions | 5-77 every other odd |
| 11.7 | Inverse Functions | 1-8, 9-81 every other odd |
| 12.1 | Exponential Functions & Their Applications | 5, 6, 7-93 every other odd |
| 12.2 | Logarithmic Functions & Their Applications | 7-93 every other odd |
| 12.3 | Properties of Logarithms | 7-97 every other odd |
| 12.4 | Solving Equations & Applications | 1, 2, 3-81 every other odd |
| 7.3 | Solving Linear Equations in Three Variables | 7, 9, 11, 17, 21, 27, 29, 41, 43 |
| 13.1 | Nonlinear Systems of Equations | 1, 4, 5, 9, 13, 17, 19, 25, 31 |
| 13.2 | The Parabola | (Ignore Focus and Directrix) 1, 2, 3, 7, 11, 15, 21, 33-39 odd, 51,-63 odd, 67, 69, 75 |
| 13.3 | The Circle | 1, 2, 3-41 odd, 45, 47, 51, 53 |
| 13.4 | The Ellipse and The Hyperbola | 4, 8, 9-21 odd, 29-39 odd, 47-54, 57, 65 |
| 13.5 | Second-Degree Inequalities | 1-45 every other odd |
| 14.1 | Sequences | 1-4, 5-39 odd, 41 |
| 14.2 | Series | 1-4, 19-49 odd, 51 |

| Sec. | Section Title | Homework Problems to Complete |
|-------------|---------------------------------|---|
| 14.3 | Arithmetic Sequences and Series | 1-4, 5-55 every other odd |
| 14.4 | Geometric Sequences and Series | 1-6, 7-57 every other odd |
| 14.5 | Binomial Expansions | 1-4, 5, 9, 13, 15, 19, 21, 27, 29, 33, 35 |