Syllabus for Math-30: College Algebra— Eureka Campus		
Semester & Year:	Spring 2016	
Course ID and Section #:	MATH-30-9131	
Instructor's Name:	Miguel-Angel Manrique	
Day/Time:	MTThF 8:30-9:35am	
Location:	SC 204	
Number of Credits/Units:	4	
Contact Information:	Office location:	SC 216G
	Office hours:	T 11-11:30am; W 8:30-9:30am, 1:30-2pm; appointment
	Phone number:	(707) 476 - 4351
	Email address:	`miguelangel-manrique@redwoods.edu`
Textbook Information:	Title & Edition:	*Algebra and Trigonometry*, 7^{th} (or 8^{th}) edition
	Author:	Sullivan
	ISBN-10:	0131430734

Course Description:

A course covering first-degree and absolute value equations and inequalities; composite and inverse functions; polynomial, rational, exponential, and logarithmic functions; systems of equations; matrices; sequences and series; mathematical induction; binomial expansion theorem; and complex numbers. *Graphing calculator required, TI-83 or 84 recommended.*

Student Learning Outcomes:

1. Evaluate and interpret a difference quotient symbolically, numerically, and graphically.
2. Find and interpret the real and complex roots of a polynomial symbolically, numerically, and graphically.
3. Produce an accurate graph of a rational function by hand, and identify all salient features.
4. Demonstrate and interpret the inverse relationship between exponential and logarithmic functions.
5. Solve problems and applications involving exponential and logarithmic functions.
6. Solve 3x3 linear systems of equations using matrices and elimination, and interpret the nature of the solution set geometrically.
7. Recognize and solve problems involving arithmetic and geometric sequences and series.

Special accommodations:

College of the Redwoods complies with the Americans with Disabilities Act in making reasonable accommodations for qualified students with disabilities. Please present your written accommodation request at least one week before the first test so that necessary arrangements can be made. No last-minute arrangements or post-test adjustments will be made. If you have a disability or believe you might benefit from disability related services and may need accommodations, please see me or contact Disabled Students Programs and Services. Students may make requests for alternative media by contacting DSPS at 707-476-4280.

Academic Support:

Academic support is available at Counseling and Advising and includes academic advising and educational planning, Academic Support Center for tutoring and proctored tests, and Extended Opportunity Programs & Services, for eligible students, with advising, assistance, tutoring, and more.

Academic Honesty:

In the academic community, the high value placed on truth implies a corresponding intolerance of scholastic dishonesty. In cases involving academic dishonesty, determination of the grade and of the students status in the course is left primarily to the discretion of the faculty member. In such cases, where the instructor determines that a student has demonstrated academic dishonesty, the student may receive a failing grade for the assignment and/or exam and may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: `http://www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.pdf` Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the college catalog and on the College of the Redwoods website.

Disruptive Classroom Behavior:

Student behavior or speech that disrupts the instructional setting will not be tolerated. Disruptive conduct may include, but is not limited to: unwarranted interruptions; failure to adhere to instructors directions; vulgar or obscene language; slurs or other forms of intimidation; and physically or verbally abusive behavior. In such cases where the instructor determines that a student has disrupted the educational process a disruptive student may be temporarily removed from class. In addition, he or she may be reported to the Chief Student Services Officer or designee. The Student Code of Conduct (AP 5500) is available on the College of the Redwoods website at: `http://www.redwoods.edu/district/board/new/chapter5/documents/AP5500StudentConductCodeandDisciplinaryProceduresrev1.pdf` Additional information about the rights and responsibilities of students, Board policies, and administrative procedures is located in the college catalog and on the College of the Redwoods website.

Emergency Procedures for the Eureka campus:

Please review the campus evacuation sites, including the closest site to this classroom (posted by the exit of each room). The Eureka campus emergency map is available at: `http://www.redwoods.edu/Eureka/campus-maps/EurekaMap_emergency.pdf`. For more information on Public Safety, go to `http://redwoods.edu/safety/` In an emergency that requires an evacuation of the building:

- Be aware of all marked exits from your area and building.
- Once outside, move to the nearest evacuation point outside your building:
- Keep streets and walkways clear for emergency vehicles and personnel.
- Do not leave campus, unless it has been deemed safe by the Incident Commander or campus authorities. (CR's lower parking lot and Tompkins Hill Rd are within the Tsunami Zone.)

RAVE – College of the Redwoods has implemented an emergency alert system. In the event of an emergency on campus you can receive an alert through your personal email and/or phones at your home, office, and cell. Registration is necessary in order to receive emergency alerts. Please go to `https://www.GetRave.com/login/Redwoods` and use the "Register" button on the top right portion of the registration page to create an account. During the registration process you can elect to add additional information, such as office phone, home phone, cell phone, and personal email. Please use your CR email address as your primary Registration Email. Your CR email address ends with "redwoods.edu." Please contact Public Safety at 707-476-4112 or `security@redwoods.edu` if you have any questions.

MATH-30, College Algebra
COLLEGE OF THE REDWOODS
Spring 2016

Instructor: Miguel-Angel Manrique
Office: SG 216G
Email: miguelangel-manrique@redwods.edu
Office hours: T 11:00-11:30am; W 8:30-9:30am, 1:30-2:00pm; by appointment
Meeting location: SC 204
Meeting times: MTThF 8:30-9:35am
Prerequisite: Grade of "C" or better in Math-120, or appropriate score on assessment exam.

Book: *Algebra and Trigonometry* (7^{th} edition), by Sullivan, published by Prentice Hall. Chapters 1-5, 11 and on will be covered in the course. The corresponding Student Solutions Manual is also recommended.

Alternatively, you may use the 8^{th} edition of the textbook with its corresponding Student Solutions Manual. Study guidelines will be provided for both the 7^{th} and 8^{th}.

A limited number of 7th edition textbooks are available on loan from the library. You can also find both the 7^{th} and 8^{th} editions online at a very low price ($5-15). For detailed textbook information, see the department course page at `http://msenux2.redwoods.edu/mathdept/courses/math30.php`. Do not purchase the textbook from the CR bookstore—you will pay 10 times the price at the bookstore. Also, do not purchase the 9^{th} or 10^{th} editions. Study Guidelines will not be provided for the 9^{th} or 10^{th} edition.

1. Course Description

The main ideas we will have a detailed look at in this course are

1. review of linear and quadratic equations
2. radical equations, inequalities, absolute value
3. applications, functions
4. piecewise-functions
5. transformations
6. polynomials, in detail
7. rational functions, in detail
8. function composition, in detail
9. the Fundamental Theorem of Algebra and consequences
10. inverse functions
11. exponential and logarithmic functions, in detail
12. sequences and series
13. systems of linear equations
14. determinants of systems of linear equations

Course Structure: You will have a chance to ask questions about homework problems at the beginning of each class period. The remainder of the session will be for thinking about (and discovering) mathematics. There will always be a class activity, unless there is an exam.

Participation and attendance: Active participation in class is an essential ingredient in this course. Participation in your group and in whole class discussions is a significant part of your grade. You will regularly explore investigations in class. You are expected to contribute to your group's problem solving, offer to present your individual process, your reasoning and your solutions to the whole class, and critically evaluate any reasoning presented in class.

For this reason, attendance is mandatory. Missing class, late arrival to class, or leaving in the middle of class will result in a lower grade. No make-ups will be given for missed quizzes or work except in the event of a true, documented emergency where the instructor is notified **in advance**–if reasonable. In such a circumstance, it is the student's responsibility to contact the instructor at the earliest possible time to make alternate arrangements.

Homework: Homework will usually be due a couple of times each week on Optimath. The homework problems will be close to the type and difficulty of material that you need to know for the exams.

Exams: There will be three midterm exams and one final exam. The final exam will be comprehensive over the entire semester.

Calculators will be allowed (and may be necessary) on most quizzes and exams. However, there may be some quizzes and portions of exams on which a calculator cannot be used.

No make-ups will be given for missed quizzes or work except in the event of a true, documented emergency where the instructor is notified **in advance**–if reasonable. In such a circumstance, it is the students responsibility to contact the instructor at the earliest possible time to make alternate arrangements.

2. Grading

In order to pass this class, you must pass the final.

$$\begin{aligned} \text{A} &= 88\%+ \\ \text{B} &= 77-87\% \\ \text{C} &= 66-76\% \\ \text{D} &= 55-65\% \end{aligned}$$

I will use the following grading scheme:

Optimath: 20%
Class participation (including attendance): 20%
Exam 1: 10%
Exam 2: 10%
Exam 3: 10%
Final exam: 30%

3. Help!

You are warmly invited to come and see me whenever you are faced with questions, confusion, insights, or concerns – or to share an exciting discovery. The listed office hours are times when I'm available specifically for you. Take advantage of this opportunity! In addition, whenever my office door is open throughout the week you are welcome to check in for help. If our schedules don't match well, email is a good way to get in touch: feel free to suggest a few times that would work for your schedule and we can make special arrangements to meet face-to-face.

Alternatively, personal help will be available in the Academic Support Center. You are highly encouraged to sign up for Math Lab (Math 30L). Math 30L is a lab course that offers 0.5 to 1.0 units of credit to get assistance with your math skills. The lab is located in the Academic Support Center. If math has been a struggle for you in the past, or if you are in search of an "A" grade, then I strongly recommend Math 30L. It has been very successful in helping students achieve their goals in mathematics.

4. Advice

Here are some suggestions for what you can do to succeed:

- Attend every class.
- Do the reading before coming to class. You may not understand all the fine details on first reading. Every time you get stuck reading, formulate a question on that material, and ask it when we discuss that topic on class. Try to identify the general ideas and concepts presented.
- Go through your notes very carefully. Be sure to understand all the ideas and examples discussed in class. Ideally, you should be able to solve the example problems discussed in class on your own, without looking at your notes. If you get stuck, consult your notes, and come to talk to me if you don't understand some of the steps. Don't memorize! Try to understand the reasoning.
- Start the homework assignments immediately and have them ready early.
- Do extra problems. I only assign a sampling of the problems from the text, but you are expected to know how to do most of the problems in the book, not just those that are assigned. Before an exam, it is excellent practice to work through problems that were not assigned in class and ask questions if you have difficulty with them. Also consult the Review sections at the end of the chapters.
- Take advantage of office hours. Office hours are time I set aside for you to come in with the questions you encountered trying to solve the problems. I can help you exactly where you are stuck. So do come with your questions!
- Use other available resources. If you have questions outside of class and office hours, you can come by and check whether my office door is open. I am also very accessible by e-mail, and you should feel free to send me a note at any time.
- Go through the review sheets carefully before the exams. A few days before an exam, I will hand out a detailed review sheet with the material you are expected to know. Use it as an outline for studying. Go through it carefully in advance, asking me questions about material you aren't sure how to do.

Best wishes for a successful semester!