# Math 125 - College Algebra - Online 

## Section \#1449

Course ID: NAKAMURA37284
Spring 2012 - Dr. Nakamura


## Course Description:

Topics include a review of techniques for solving algebraic equations and inequalities; definitions and properties of functions and inverse functions; graphs of linear, quadratic, and other polynomial functions and of rational functions; translations and combinations of functions; zeros of polynomial functions; definitions, graphs, and properties of exponential and logarithmic functions; techniques for solving exponential and logarithmic equations; and techniques for solving systems of equations.

## Math 125 Student Learning Outcomes:

1. Students will be able to sketch graphs of many different types of functions, utilizing mathematical reasoning and careful analysis.
2. Students will be able to solve both equations and inequalities, recognizing problem types and applying appropriate mathematical strategies to find solutions.
3. Students will be able to recognize a system of equations and apply mathematical reasoning to solve these systems both graphically and algebraically, communicating their thought processes in logical and understandable ways.

## Required Materials:

MyMathLab (Student Access Kit). This kit contains the MyMathLab software as well as an electronic version of the text. You may purchase the kit online at www.coursecompass.com using a credit card, or purchase an access code from the College Bookstore and then log on using the access code. Detailed instructions about logging onto MyMathLab will be sent to you via email.

## Optional Materials:

Some students prefer a hard copy of the text for reference. In addition to the required MyMathLab kit, those students may purchase a hard copy of the text: College Algebra by Sullivan, Eighth Edition, (ISBN-10: 0132402866).

All exams will be taken WITHOUT calculators. On the Exams, you must show steps and supporting work algebraically and give exact answers. You may use a calculator while completing some of the homework, quizzes and reviews. However, I strongly recommend that you do your homework, quizzes and reviews without using your calculators since you're not allowed to use it when you're taking your exams. Students are not allowed to bring their own calculators for exams at the Academic Proctoring Center.

## Required On-Campus Meetings:



You must come to Oceanside or San Elijo campus to take each of the three tests and the Final Exam. Tests are given at the Academic Proctoring Center (APC) on the Oceanside and San Elijo Campuses. The testing windows for the three exams and final exam are:

Exam 1 (1.1-1.6, 2.2, 2.4) Monday, 2/13-Wednesday, 2/15
Exam 2 (3.1-3.5, 4.1, 4.3)
Monday, 3/12-Wednesday, 3/14
Exam 3 (8.1, 5.1-5.3, 5.5, 5.6) Monday, 4/16 -Wednesday, 4/18
Final Exam (Cumulative, Ch. 6 included) Monday, 5/21 -Wednesday, 5/23
The Final Exam will be given on Oceanside or San Elijo campus at the Academic Proctoring Center (APC) from Monday, December $12^{\text {th }}$ through Wednesday, December $14^{\text {th }}$.

## Academic Proctoring Center's Hours:

## Please go

to http://www.miracosta.edu/StudentServices/ProctoringCenter/schedule.htm Or call 760-757-2121 ext. 6471 to make an appointment and to see the hours of operations. Students are required to schedule an appointment for their exam.

## Grading Procedures:



There will be approximately 30 homework assignments, 11 quizzes, 4 exam reviews that each count as a quiz (so, a total of 15 quizzes), three exams, and one cumulative Final Exam. The percentage that each category counts toward your course grade is given in the chart below.

| Grade Category | Percentage of Overall Grade (\% <br> per assignment) | Total Percentage Per Category |
| :---: | :---: | :---: |
| Homework | $0.2333 \%$ (30 assignments) | $7 \%$ |
| Quiz | $0.5333 \%$ (15 quizzes) | $8 \%$ |
| Exam | $20 \%$ (3 exams) | $60 \%$ |
| Final Exam | $25 \%$ (1 Final Exam) | $25 \%$ |

Grading procedure is as follows:

| Grade | Course Average in Percent Format |
| :---: | :---: |
| A | $90.00 \% \sim 100 \%$ |
| B | $80.00 \% \sim 89.99 \%$ |
| C | $70.00 \% \sim 79.99 \%$ |
| D | $60.00 \% \sim 69.99 \%$ |
| F | Below $60.00 \%$ |

Lessons, Quiz, Review Due Dates - Spring 2012: (You can view this under "Lesson Plans" in CourseCompass)

| Lesson | Material Covered | Due Date |
| :---: | :---: | :---: |
|  | Orientation for Math 125 | Thurs, 1/26 |
| Lesson 1 | Review for Math 125, 1.1, 1.2, 1.3, Quiz 1 | Sun, 1/29 |
| Lesson 2 | 1.4, 1.5, 1.6, Quiz 2 | Sun, 2/5 |
| Lesson 3 | 2.2, 2.3, 2.4, Quiz 3 | Sun, 2/12 |
|  | Exam 1 Review | Tue, 2/14 |
| Lesson 4 | 3.1, 3.2, 3.3, Quiz 4 | Sun, 2/26 |
| Lesson 5 | 3.4, 3.5, Quiz 5 | Sun, 3/4 |
| Lesson 6 | 4.1, 4.3, Quiz 6 | Sun, 3/11 |
|  | Exam 2 Review | Tue, 3/13 |
| Lesson 7 | 8.1, 5.1, 5.5, Quiz 7 | Sun, 4/1 |
| Lesson 8 | 5.6, Quiz 8 | Sun, 4/8 |
| Lesson 9 | 5.2, 5.3, Quiz 9 | Sun, 4/15 |
|  | Exam 3 Review | Tue, 4/17 |
| Lesson 10 | 6.1, 6.2, 6.3, Quiz 10 | Sun, 4/29 |
| Lesson 11 | 6.4, 6.5, 6.6, Quiz 11 | Sun, 5/13 |
|  | Chapter 6 Review | Sun, 5/20 |

## How to Study Math in This Online Course:



## Q: Are you up-to-date on the prerequisite material?

A: The prerequisite for College Algebra is Intermediate Algebra. If it has been more than one semester since you have had Intermediate Algebra, you may find that you have forgotten some of the material. Review the material in the first two chapters, and if you feel unprepared for this course, please email me and we can discuss your preparation and possible options.

## Q: Are you prepared to learn in an online environment?

A: Learning in an online environment can be challenging. Discipline and dedication are required. It is easy to get carried away by other life events and postpone your online assignments, or to feel "disconnected" from the class and lose your motivation. Make it a priority to stay caught up in the course and to interact with me and with the other students in the class through the Discussion Board in MyMathLab. This will help you to stay motivated and to complete the class successfully.

## Q: How will I learn the material in this online class?

A: In MyMathLab you will find eleven Lessons. Work your way completely through all lessons, finishing each by the due date. The careful completion of all lessons is important to your success in this class.

## Q: How often do I need to $\log$ on?

A: In order to succeed in this class, most students need to work daily. Most of the due dates for Lessons are on Wednesday and Sunday evenings at 11:59pm. On each due date, several homework assignments and a quiz are due. In order to learn the material properly, it is important to spread out the work during the week. I recommend that you complete the homework assignments throughout the week, and start the quiz right away so that you will have time to redo the quiz several times with review in between if needed. Your goal should be to make $100 \%$ on all homework assignments and all quizzes. You must log on at least three times a week in order to remain in the class. If more than three or four days elapse without you logging on, you may be dropped from the class.

## Q: What should I do to prepare for exams?

A: Here are some suggestions for test preparation:

- Thoroughly cover each section. At a minimum you must complete every part of each lesson including all of the following: For each section, thoroughly read the lecture notes for that section and complete the example problems and/or thoroughly read the e-text section and complete the example problems from that section, and complete the homework assignment and redo if needed to obtain a score of $100 \%$.
- Make $100 \%$ on every quiz. For each quiz, and complete and redo it as many times as needed to obtain a 100\% (You can only redo a quiz before the due date). In between attempts, review or get assistance, if needed.
- Review before each test. Complete the online Exam Review (that counts as a quiz grade) and the optional Chapter Review (these are paper-and-pencil reviews) that covers the material on the test.
- Complete all homework, quizzes and reviews for the material on the test. Remember that quizzes are only "snapshots" of the material, homework assignments generally cover most of the important aspects of the material, and reviews provide a necessary "holistic" view of the material. The successful completion of all three ( $100 \%$ on each homework assignment, quiz and review) is necessary to properly prepare for a test.
- Complete additional review if needed. Complete other problems from the textbook for additional practice, if needed.
- Prepare for tests under testing conditions. Complete the Exam Reviews with no references (textbook, "cheat-sheet," calculator) and a time limit. Go back and review anything that you missed, and then try again without references. Keep trying until you can get all of the problems correct.


## Q: Are there any special tricks in preparing for the exams?

A: Yes! How you prepare absolutely matters! Practice for an exam should be done in an environment that is as close as possible to actual testing conditions. That means completing work without references and with a time constraint. The first time that you work through a test review, use references when necessary. Then put away all references and work through the entire review. After completing the work, check your answers. Continue working through the review and then grading your work until you can complete the all of the problems without any errors.

Q: How do I find out due dates, testing windows, where to take tests, and other crucial information about this online course?

A: You will find this information in the syllabus and announcements. It is your responsibility to read the syllabus and check announcements daily to keep in touch with what is going on in the class. Email me at Inakamura@miracosta.edu whenever you have any questions.

## Q: What resources are available to me to help me succeed in this online class?

A: Here are some of the resources available:

- CouseCompass. Use the software to access videos, example problems, step-by-step solutions, the electronic text, and your homework, quizzes and online test reviews.
- Lecture Notes/Examples: Lecture notes and examples will be posted in CourseCompass. These notes contain some important formulas and methods you need to know and memorize for exams.
- Math Learning Center (MLC) Assistance: Instructors and aides in the MLC (Math Learning Center) are available to answer homework questions that you may have. Find the locations and hours at the MLC website.
- Tutoring: Free tutoring is available in the Tutoring Center located in the Library and Information Hub. Find the hours and locations at the Tutoring Center website.
- Office hours and Email Communication: Please use my regularly schedule office hours on Tuesdays and Thursdays from 3-3:30pm at the Oceanside Campus. I also check and respond to emails on CourseCompass and at Inakamura@miracosta.edu at least twice a day during the weekdays. I usually do not check email on the weekend, however on occasional weekends I do check emails. I check only MiraCosta and CourseCompass emails. Please don't use any emails other than these two.
- The Discussion Board on CouseCompass. Use the discussion board to ask questions and to answer questions that other students have posted. I do not monitor these discussions. Please remember in using the Board to be kind, generous, and patient with your classmates. All interactions must be appropriate, as they would be in an actual classroom.


## Information about Homework Assignments, Quizzes, Reviews, Exams, and the Final Exam:

Give yourself plenty of time before the due date to redo all homework assignments for the Lesson. You should score $100 \%$ on all homework assignments. Use the "Help Me Solve This" button to guide you through the problem if you are having difficulty. Email me, use the etext, or post a question on the discussion board if you still have questions.

Quizzes: Each Lesson contains one quiz that covers several sections.
Q: Where do I find the quizzes?

A: Quizzes are online and completed through CouseCompass. All quizzes must be completed and submitted online.

## Q: What are the due dates for the quizzes?

A: See the "Course Calendar-Due Dates" or "Lesson Plans" listed in the CouseCompass menu bar for due dates.

Q: What time on the due date is the quiz due?
A: Quizzes are due at 11:59pm on the due date.
Q: Are quizzes closed book?
A: You may use the text, lecture notes and other references when you are taking quizzes. However, it is best to try to complete the quizzes without notes. If you need to look at your notes to complete a problem, then be sure to redo that problem without looking at your notes. You won't have your notes on an exam!!

## Q: How many times can I take a quiz?

A: Before the due date for a quiz, you may take and retake a quiz as many times as you would like. Each time you try the quiz again, you get a version with slightly different numbers, but the same types of problems. Your highest score for all of your attempts is the one that counts. In between attempts, you can look at your results to see what you missed. You should redo each quiz as many times as needed before the due date to score a $100 \%$ on the quiz.

## Q: How should I complete these online quizzes?

A: For each quiz, copy each problem in your homework/quiz/review, work the problem out completely, showing all steps, and then enter the correct answer in CouseCompass. Remember: To best prepare for the paper-and-pencil exams that are given on campus, complete all of your preparatory work in an environment as close as possible to the testing environment: write down your problems, solve them showing all steps, avoid using text or other references (if you need to use references for a problem, redo that problem later without reference), and time yourself.

Reviews for Exams: There are two reviews available for each test.

- The first is an online exam review found in CouseCompass. All of the online reviews found in CouseCompass count as quizzes. Each Exam Review is due by 11:59pm on the due date.
- The second review is a paper-and-pencil review corresponds to the chapter covered for that exam. You will find these reviews in the CouseCompass menu bar under "Optional Chapter Reviews". These reviews are optional, but I believe that you will find them very helpful in studying for the exams.
- Remember: To best prepare for the paper-and-pencil exams that are given on campus, complete all of your preparatory work in an environment as close as possible to the testing environment: write down your problems, solve them showing all steps, avoid using text or other references (if you need to use references for a problem, redo that problem later without reference), and time yourself.


## Tests:

Q: Where are the tests given?
A: You will take all three tests at the Academic Proctoring Center (APC) on the Oceanside or San Elijo campus during the testing window.

Q: When are the testing windows?
A: For each test, a testing window will extend for 3 days. Here is the schedule:
Exam 1 (1.1-1.6, 2.2, 2.4) Monday, 2/13 -Wednesday, 2/15
Exam 2 (3.1-3.5, 4.1, 4.3)
Monday, 3/12-Wednesday, 3/14
Exam 3 (8.1, 5.1-5.3, 5.5, 5.6) Monday, 4/16 -Wednesday, 4/18
Final Exam (Cumulative, Ch. 6 included)
Monday, 5/21 -Wednesday, 5/23
Q: What hours are available for me to take an exam?
A: The APC is open selected hours-some daytime and some evenings. You must complete your exam before the APC's scheduled closing time. 90 minutes are allowed for each exam, so plan to arrive at the APC 90 minutes before closing time. Visit the APC website to see hours, location and appointment information. You can check this by logging on to CourseCompass and click on "APC" icon on the left hand side of the screen.

Q: Do I need to make an appointment to take an exam?

A: Yes, you must make an appointment to take each exam.
Q: What if I fail to take the exam during the testing window?
A: You will get a score of 'zero' on that exam.
Q: What if I don't take an exam at all?
A: Students who don't take an exam during the testing window will earn a zero on the exam and may be dropped from the class.

Q: May I use a calculator?
A: You may NOT use a calculator on the exams. However, if you will be allowed to use a scientific calculator on the exam, scientific calculators will be available for you to borrow and use during each exam. Most exam problems require that all steps and supporting work be shown and exact answers given. Work must be shown algebraically.

Q: How do I get my exams back?
A: If you would like your graded exams to be returned to you, please bring a stamped, self-addressed envelope to the exam and leave it with the proctor.

## Final Exam:

For the 2 hour Final Exam, the testing window extends from Monday, 12/12 through Wednesday, $12 / 14$ at the Academic Proctoring Center on the Oceanside or San Elijo Campus. Be sure to arrive in time to complete the final by the APC closing time. No finals will be given after Wednesday, 12/14. Students who have not completed the Final Exam by Wednesday, December $14^{\text {th }}$ will receive a zero on the Final Exam.

## Calculators:

You are NOT allowed to use a scientific calculator on the exams. However, if needed, scientific calculators will be available for you to use during the exam. For most exam problems, you are required to show all steps and supporting work and obtain exact answers. Work must be shown algebraically.

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

1. Classify equations by type (linear, quadratic, rational, radical, exponential, or logarithmic) and solve by applying the appropriate technique.
2. Simplify expressions involving radicals, algebraic fractions, exponents, logarithms and complex numbers.
3. Graph linear and quadratic functions, identify intercepts and find the vertex of a parabola.
4. Analyze verbal problems, model with appropriate functions, substitute the known values, and solve the resulting equations.
5. Identify relations which are functions and determine the domain of a given relation or function.

## Courtesies:

Our online environment is based on mutual respect. All of our interactions with one another should be respectful, kind and helpful. Please gauge all of your actions in this class against this standard. Below are several guidelines that all are expected to follow.

- All exams are given on campus in a classroom or proctored environment. Academic dishonesty on a test will result in a zero on that test. All cell phones must be turned off and put away during exams.
- On the Discussion Board, focus on mathematics at hand and avoid personal comments, and please be encouraging, positive, and helpful. Be sensitive to the feelings of others. Please avoid criticism and teasing or joking that might be hurtful to others.
Thank you for your cooperation in these matters.


## Attendance Policy

"Attendance" in this online course is measured by your completion of online work. You may be dropped from class if you fail to meet any of the following attendance requirements:

- First-day attendance requirement: You must log onto MML and begin work by Monday, January $23^{\text {rd }}$. For instructions on how to log onto MML, log onto Blackboard and follow the instructions on the home page for this course. Also, you must complete Lesson 1 by the due date of Sunday, August $28^{\text {th }}$. Please note that the lesson is a bit long since it consists of completing orientation material, learning the material in sections 1.1, 1.2, and 1.3, completing homework for those three sections, and completing Quiz 1. You need to start early in order to be able to complete the Lesson by the due date.
- "Attend" by being completing homework and quizzes online. If you fail to be present in at least one of those environments for more than two days in a row, you may be dropped from the class. It is best to log on and work daily, but you must log on and work at least three times per week.
- You may also be dropped from class if you do not take an exam during the testing window.


## Academic Honesty

I fully support MiraCosta College's belief that academic honesty is a cornerstone of the educational community. To that end, I expect academic honesty of my students. Students who bring unauthorized material to a test or copy from another's test will receive a zero on that test. You may use your textbook and notes on quizzes and may ask questions on the Discussion Forum, but complete your work on your own and do not share answers with others.

## Disability Accommodations:

Students with disabilities, whether physical, learning, or psychological, who believe that they may need accommodations in this class, are encouraged to contact Disabled Students Programs \& Services as soon as possible to ensure that such accommodations are implemented in a timely manner. Their phone number is 795-6658 and they are located in Building 3000-Student Services, Room 3009, adjacent to Parking lot $3 C$.

## How to Get Started on This Class:

To begin working, log onto Blackboard using your Surf ID and password, click on this class, Math 125 (Section 1449), and follow the directions there for logging into Course Compass. There you will find MyMathLab (MML), the program that contains all of your class materials. You must $\log$ onto MML and begin work by Monday, January $23^{\text {rd }}, 11: 59 \mathrm{pm}$, and you must complete Lesson 1 by the due date of Sunday, January $29^{\text {th }}$.

## Academic Proctoring Center:

The three exams and the Final Exam (cumulative) are given on the Oceanside campus at the Academic Proctoring Center (APC). The hours, location and procedures to make a testing appointment are given on the APC website. Appointments are required. If you are late for your appointment, you may lose your seat or, if you are allowed to take the test, you will be required to complete the test in the original window that you scheduled. If you miss an appointment, it is possible that no other appointments will be available during the testing window. You must schedule your appointment so that you have enough time to complete your test before the APC closes.

Following are a few of the important APC rules. Please remember that you must read and abide by ALL of the rules and policies. It is your responsibility to read, understand, and follow ALL rules and policies of the APC. You will find the rules and policies on the APC website.

1. Make an appointment to use the center and arrive on time. An appointment time should be chosen that allows for the exam's full time limit. (All outstanding test materials are collected at the Center's posted closing time.)
2. Provide acceptable photo identification.
3. Turn off cell phones and other electronic devices, and place all personal belongings in a designated area.
4. Arrange childcare off-campus when using the APC.
5. Be courteous to staff and other students.
6. Abide by test instructions on the Test Transmittal Form submitted by your instructor.
7. If permitted to use a calculator, use one that is APC-provided.
