Syllabus
MAC1105 College Algebra

Term: FALL 2009-1 Reference #: 528214

Instructor's Name: Francois, J.O. E-mail: jfranco1@mdc.edu

Office: Math Lab, Room # 2223 Mail-box: Math Lab, Room # 2223

Office Hours: S : 12:30 – 2:00 PM (Also by appt.)

To leave a message for the instructor, please call the Math Lab at 305-237-3834 during its hours of operation:

MTWR 8:00 AM - 9:00 PM F 8:00 AM - 4:00 PM S 8:00 AM - 4:00 PM.

Course Description:

This course introduces the student to the concept of functions and their graphs. Students will graph linear, quadratic, rational, exponential, logarithmic, radical, power, and absolute value functions and transformations; perform operations on and compositions of functions; find the inverse of a function; apply the laws of logarithms to simplify expressions and solve equations; graph non-linear inequalities; solve related applications and modeling problems.

AA degree-seeking students: Upon successful completion of MAC1105 (grade of A, B or C), you should register for MGF1106, MGF1107, or STA2023 depending on your major and the institution to which you are planning to transfer. Education majors may take MTG2204. Be sure to take your mathematics courses in consecutive terms

Credits: 3

Pre-requisites

MAT1033 (Grade C or better), or appropriate placement score

Textbook

College Algebra Enhanced with Graphing Utilities, 5th Ed, by Sullivan; Pub. Prentice Hall

At the Instructor's discretion, a TI-83 or TI-84 Graphing Calculator may be required

Assistance

You can obtain assistance for mathematics classes in the Mathematics Laboratory, room 2223. There, you will find course-related videotapes and computer software, and tutors that can help you to successfully complete this course. The Math Lab is open during these hours:

MTWR 8:00 AM - 9:00 PM F 8:00 AM - 4:00 PM S 8:00 AM-4:00 PM.

You do not need an appointment to get assistance from the tutors on the Floor, but the tutors on the Floor must help all the students and may have to take turns; they cannot work with one student for a prolonged period of time.

One-to-one tutoring (1 hour long session) is available by appointment only. Please visit the Math Lab and speak to any of the Supervisors to schedule an appointment.

If you have a problem with the Math Lab, please contact any of the supervisors: Arcides Acosta, Maliya Beylin, Jose De Paz, or Verdieu Lucas at 305-237-3834 or visit their offices in room 2223. If after speaking with a supervisor the problem persists, then you need to visit the chairperson, Dr. Alicia Giovinazzo (office 1540) as the next step.

Classroom and Laboratory Etiquette

The instructor would like to welcome all students into an environment that creates a sense of community, pride, courtesy and respect; we are all here to work cooperatively and to learn together. In order to create a smooth and harmonious learning community, please make every attempt to come to all the class sessions, to come to class on time, and to stay until the end of the class session unless you have informed your instructor that you must leave early. There may be a time when you are unavoidably late for class, in that case, please come into the room quietly (through the back door if there is one) and choose a seat closest to the entrance.

Once the class session has begun, please do not leave the room and then re-enter unless it is an emergency. If you miss a class meeting for any reason, you are responsible for all material discussed, for announcements made in your absence, and for acquiring any materials that may have been distributed in class. You are responsible for contacting the instructor for this information.

It is important that we are all able to stay focused on the class discussion. For this reason, only one person in the class at a time should be speaking. Side conversations are distracting for surrounding students and for the instructor. Professional behavior is expected at all times. You are encouraged to ask questions.

Please refrain from bringing food or drinks into any classroom or the Math lab.

Beepers and Cellular telephones must be turned off. The vibrate mode is not considered turned off. Absolutely no text messaging or instant messaging is allowed in the classroom. The instructor will ask you to leave the classroom for the day if you are caught.

Problems with Instructor

If you are having a problem with your mathematics instructor, please see that instructor during office hours. Before or after class is generally not a good time to discuss a problem with an instructor who is either about to start class or on the way to the next class. If after speaking with your instructor during office hours you cannot resolve the problem, then you need to visit the chairperson, Dr. Alicia Giovinazzo (office 1540) as the next step.

Professional Student Behavior

The MDC Students' Rights and Responsibilities Handbook describes students' appropriate and inappropriate behaviors, along with their consequences. Additionally, please be aware that cheating, plagiarism, and disruptive behavior are not tolerated and can result in serious consequences such as failure of a course or dismissal from the college. For more information, go to http://www.mdc.edu/policy/student_rights_and_responsibilities.pdf

Office Hours

Your professor urges you to avail yourself of his/hers individual instruction during office hours. Do not wait until you are in trouble. If you have been absent or late to class, please read the lesson you missed and come to his/her office prepared with questions.

Attendance

The number one key to educational success is to attend classes. Students are responsible for any work missed when absent. Class attendance will be recorded daily. Frequent absences may cause you to be drop from the course. You should make it an effort to be in class, and on time. Lateness is rude and disruptive.

Registration

It is your responsibility to make sure that you are registered for this course. Be sure to obtain a copy of your schedule to verify the reference number and that you do not have any outstanding fees. You will not be allowed to take the final exam if you are not in your instructor's class roster so make sure to resolve any issues prior to the final exam date.

Withdrawal

If you feel that you will be unable to complete the requirements for passing this class, it is important that you drop the class by the college's "drop date" as established by the registrar's office. You should speak to your instructor prior to making the decision to drop. Remember that it is your responsibility to drop a class, not the instructor's. If extenuating circumstances such as illness, accident, change in employment situation, etc., prevent you from continuing to attend your class before the drop date, speak to your instructor first and if needed, to the Chairperson, Dr. Alicia Giovinazzo (office 1540) to assess your options. If such a situation occurs after the drop date, you should contact the instructor for information as to how you can complete the requirements for passing the course.

Grading

In this class, you will have

- Online homework assignments,
- 4 exams,
- One midterm and one comprehensive final exam.

Online Assignments: You will need to log into www.coursecompass.com ; there, you will find the complete textbook online, along with videotapes and homework tutorial assignments and quizzes. You will not need to buy the textbook. All you would need to purchase is the access code to the site, which costs about $ 70.00. Follow the instructions to register. When completing the registration, they will ask you for the COURSE ID. The Course ID for this class is :

Your grade will then be distributed as follow:

Homework Online:	20%	Average of 90 - 100%	A
Best 3 out 4 exams:	50%	Average of 80 - 89%	B
Midterm and Final exam:	30 %	Average of 70 - 79%	C
Total	100%	Average of 60 - 69%	D
		Average below 60%	F

If you miss one of the above assignments, then your grade on the missed one is a zero. There are NO exceptions.

In addition, at the discretion of the instructor, students may be assessed through various in-class activities such as board work and small group presentations.

Incomplete

The grade of I (Incomplete) is given in the rare case that a student is passing (have an average of C or better and have completed at least 75% of the work) but for some extenuating circumstance is unable to complete the last part (usually the final exam) of the class. If you are not passing your class, it is not possible for your instructor to give you an I. Note that you will have one full term (Fall or Winter) to complete the requirements of your Incomplete Contract. If you do not complete your requirements in that time, the I generally will automatically change to an F on your records. The instructor makes the determination as to whether you are eligible for an Incomplete.

MDC Email Account

Students are required to activate and use their MDC email account. The MDC account allows students to receive email from their instructors and get notification/announcements or other pertinent information from the College

Important Dates

Class begins	
Weekdays and Evening	M Aug 24
Weekend (Saturday and Sunday)	S Aug 29
Last day to Withdraw with a Grade of W	T Nov 3
Last day of Final Exams	F Dec 18

Holydays

Labor Day: S Sep 5, U Sep 6, M Sep 7

Veterans Day: W Nov 11

Thanksgiving: R Nov 26, F Nov 27, S Nov 28, U Nov 29

Miami-Dade Learning Outcomes

As graduates of Miami Dade College, students will be able to:

1. Communicate effectively using listening, speaking, reading, and writing skills.
2. Use quantitative analytical skills to evaluate and process numerical data.
3. Solve problems using critical and creative thinking and scientific reasoning.
4. Formulate strategies to locate, evaluate, and apply information.
5. Demonstrate knowledge of diverse cultures, including global and historical perspectives.
6. Create strategies that can be used to fulfill personal, civic, and social responsibilities.
7. Demonstrate knowledge of ethical thinking and its application to issues in society.
8. Use computer and emerging technologies effectively.
9. Demonstrate an appreciation for aesthetics and creative activities.
10. Describe how natural systems function and recognize the impact of humans on the environment.

Each course taken at the college addresses some of these Learning Outcomes. College Algebra (MAC1105) addresses outcomes 1, 2, 3, 4, and 8.

- Communicate effectively using listening, speaking, reading, and writing skills.
  This course requires reading and understanding the material covered in the textbook. Students will need to pay attention in class and may periodically be asked to explain a concept discussed in class.

- Use quantitative analytical skills to evaluate and process numerical data.
  The student will have the opportunity to develop these skills in solving applications of linear, exponential and Logarithmic equations in two variables. They will also develop the ability to read and interpret graphs that represent patterns (models) of data.

- Solve problems using critical and creative thinking and scientific reasoning.
  Some of the applications of equations in two variables and of rational expressions will require the use of critical and creative thinking. Students will have to use the information given in a problem to set up equations (models) in one or two variables. They may at times need to use a chart to organize the information given in the problem. The problem solving approach they will use in this course constitutes an important contribution to the development of their scientific reasoning ability.

- Formulate strategies to locate, evaluate, and apply information.
  The areas that will provide students with this opportunity are applications of linear equations and systems of linear equations in two variables as well as variation problems.

- Use computer and emerging technologies effectively.
  Most homework assignments and quizzes will be posted on line on the Course Compass/My Math Lab website. Students will develop the ability to use these computer resources to monitor their progress and to help them reach a better understanding of the concepts, ideas and applications discussed in the course. They will also have the opportunity to use the external links posted on the website to explore topics related to the course goals and objectives.

MAC1105

Syllabus, Homework Assignments
Tentative Schedule (16 Week term)

Week	Sect.	Topic	Suggested Homework (odds unless otherwise noted)
1	1.1	Rectangular Coordinates; Introduction to Graphing Equations	11 - 89
	1.3	Quadratic Equations	11 - 65
2	1.4	Complex Numbers; Quadratic Equations in the Complex Number System	9 – 71
	1.5	Radical Equations; Equations Quadratic in Form; Absolute Equations; Factorable Equations	9 – 59, 67 – 79, 85 - 91
	1.7	Solving Inequalities	11 - 85
	2.1	Intercepts; Symmetry; Graphing Key Equations	9 – 61
	2.2	Lines	11 – 109 (every other odd)
4	2.3	Circles	7 – 41, 43 – 46 (all)
	Review for Exam # 1		
	===== Departmental Exam # 1 =====		
5	3.1	Functions	15 - 79
	3.2	The Graph of a Function	9 - 27
	3.3	Properties of Functions	11 - 61
6	3.4	Library of Functions; Piecewise-defined Functions	9 – 37, 41, 43
	3.5	Graphing Techniques; Transformations	7 – 18 (all), 19 – 33, 39 – 65, 69
	3.6	Mathematical Models: Building Functions	1, 2, 3, 5, 7, 10, 15
7	Review for Exam # 2		
	===== Departmental Exam # 2 =====		
	Review for Midterm		
8	===== Departmental Midterm =====		
	4.3	Quadratic Functions and their Properties	11 – 18 (all), 19 - 55
9	4.4	Building Quadratic Models from Verbal Descriptions and From Data	3, 4, 5, 6, 7
	4.5	Inequalities Involving Quadratic Functions	3 - 21
10	5.1	Polynomial Functions and Models	11 – 81 (every other odd)
	5.2	Properties of Rational Functions	11 – 27, 41 - 49
	5.3	The Graph of a Rational Function	7 - 19
11	5.4	Polynomials and Rational Inequalities	5, 6, 9 - 47
	Review for Exam # 3		
	===== Departmental Exam # 3 =====		
12	6.1	Composite Functions	7 - 43
	6.2	One-to-one Functions; Inverse Functions	9 - 69
13	6.3	Exponential Functions	11 - 83
	6.4	Logarithmic Functions	9 – 61, 63 – 70(all), 87 - 109
	6.5	Properties of Logarithms	7 - 77
14	6.6	Logarithmic and Exponential Equations	5 - 55
	6.7	Financial Models	3 - 29
	6.8	Exponential Growth and Decay Models	1, 2, 3, 5
15	Review for Exam # 4		
	===== Departmental Exam # 4 =====		
	8.1	System of Linear Equations: Substitution and Elimination	7 - 47
	8.3	System of Linear Equations: Determinants	1 - 39
16	===== Departmental Cumulative Final Exam =====		