



Course: COLLEGE ALGEBRA – MAC 1105
Term: SPRING 2011 (TR meeting)
Instructor: María del Pilar Orjuela G
E-mail address: maria.orjelagarabito@fiu.edu, pily.org@gmail.com
Office hours: TR 9:30 am – 10:30 m or by appointment at DM409A

Textbook: Algebra & Trigonometry by M. Sullivan custom edition for FIU packaged with MyMathLab access code (or 8th edition + MyMathLab access code, or MyMathlab Access Code alone, which contains an electronic version of the textbook)

Prerequisites: C or better in Intermediate Algebra or at least 30 in the test called ALEKS.

Course Description: The focus of this course is on functions and their properties. In particular, properties and graphs of linear, quadratic, rational, exponential and logarithmic functions are discussed. Ways of solving systems of equations are introduced at the end of the semester.

Course Objectives: After finishing the course students should have a good understanding of the concept of a function, its domain and range. They should be able to graph basic functions and be familiar with their properties. They should be able to perform operations on functions, form composition and find the inverse of some one-to-one functions. They should know and be able to apply properties of logarithms. They should be able to solve exponential and logarithmic equations and systems of equations.

Material to be covered:

- Chapter R - review: Sections: 2, 4, 5, 7, 8
- Chapter 1- review: Sections: 1, 2, 4, 5
- Chapter 2: Sections: 1, 2, 3, 4
- Chapter 3: Sections: 1, 2, 3, 4, 5, 6 and departmental handout More on Functions
- Chapter 4: Sections: 3, 4, 5
- Chapter 5: Sections: 1, 2, 3, 4
- Chapter 6: Sections: 1, 2, 3, 4, 5, 6, 7, 8
- Chapter 12: Sections: 1, 6.

Examinations: There will be three in-class paper and pencil exams and a comprehensive departmental final exam (see the schedule). Moreover, *you will have weekly online homework and online quizzes assigned in MyMathLab.*

Online Assignments: To access online assignments you must purchase an access code for MyMathLab. You can purchase it together with the textbook at FIU bookstore, or as standalone item either at the bookstore or at <http://www.coursecompass.com>. (The instructions on how to register are attached). If you are repeating the course, you most likely have the access code, which you can use for this class. Login to your account and enter the course ID of this course to register into the current section. If you are not able to purchase an access code immediately, you can use a temporary access code valid for 21 days. Ask the instructor for the information.

- First assignment is **due on January 19 at midnight**, so buy the access code as soon as possible.
- All online assignments have a due date. They will generally be available till 11:59pm on a due day. At that time, program will not allow you to continue, therefore you have to plan accordingly. You will not be able to finish 80 problems in two hours. Late submissions will not be accepted under any circumstances.
- Online problems are algorithmic iterations of textbook exercises.
- Homework assignments can be attempted an infinite number of times, but must be completed within assigned period of time.
- There is one quiz per week. Quiz is associated with the homework assigned for that week. A quiz can be taken three times and the highest score is registered.
- To take a quiz, you must score at least 80% on the associated homework. If you don't receive required 80% on the prerequisite homework, you will not be able to take the associated quiz and consequently, you will receive 0% on that quiz.
- At the end of the semester, the homework assignment with lowest grade and the quiz with the lowest grade will be dropped.

The **deadlines will not be extended** under any circumstances. All assignments are due at midnight on the due day. Do not wait till the last moment to complete the assignments since you don't know what problems, technical or not, you might encounter along the way.

Please be advised that merely completing online assignments is not a guarantee of success in the class. You need to understand what you do. A test question will not come with the "show me an example" button. So, if you can't correctly do a homework problem without any help, you will not be able to do a similar problem on a test.

Keep in mind that your grade in this class will be determined mainly by your performance on the tests.

Grading policy: To get a full credit for a problem on the test you must show your work. An answer alone, even correct, will get no credit. Please note that **if you decide to skip online assignments, you will have to score at least 88% on each test to receive a passing grade (C).**

Your grade will be calculated as follows:

Option I:	% of Grade
Test 1	18%
Test 2	18%
Test 3	19%
Final exam	25%
MyMathLab online homework	8%
MyMathlab online quizzes	12%
Total Option 1	100%

Your final grade will be assigned according to the following scale.

A: 93 – 100	B + : 86 – 88	C+: 75 – 78	D +: 60 - 64
A- : 89 – 92	B: 83 – 85	C: 70 – 74	D : 55 - 59
	B-: 79 – 82	C-: 65 – 69	F: 0 - 54

Make-up Policy: *There will be no make-up tests.* If you miss a test due to illness or other emergency and provide documentation supporting your claim, your final exam will count in place of the missed test. There will be no make-ups for online assignments, but the lowest score on homework assignments and quizzes will be dropped.

Attendance Policy: You are expected to attend all classes. It is your responsibility to complete all assignments on time regardless of whether or not you were present in the class. Excessive absence will be taken into consideration when assigning the grade. *Up to 5 points can be deducted from your total at the end of the semester for missing more than 5 lectures.*

Calculator Policy: Use of graphing calculators is prohibited in this course. The scientific calculator TI-30XA will be used occasionally.

Incomplete Grade Policy: The incomplete grade is given to a student who has substantially completed most of the course work but is unable to finish an exam or other work because of circumstances beyond the student's control. An IN grade cannot be given if it is necessary for the student to repeat the course. An incomplete grade must be made up within two semesters. There is no extension of the two semester deadline. The student must not register again for the course to make up the incomplete. Every incomplete grade must be approved by the Mathematics Department.

Drop Date: The last day to drop a course is March 4.

Academic Misconduct: Includes (but is not limited to) giving or receiving assistance on a test, quiz, or homework assignment for which such assistance is not permitted, falsifying a document to obtain an excusal from a test, and using unauthorized notes on a test or quiz. A more complete definition of Academic Misconduct is given in the Student Handbook. Penalties for Academic Misconduct range from an F in the course to expulsion from the University.

Tutoring Services: The Mathematics Department and the University offers a variety of services, ranging from online videos to free tutoring, designed to help students with their courses. Please visit <http://casgroup.fiu.edu/MathStatistics/pages.php?id=1168> for more details.

Classroom Etiquette: To create and preserve a classroom atmosphere that optimizes teaching and learning, students are expected to conduct themselves at all times in a manner that does not disrupt teaching or learning. You are expected *to come prepared to the class, be on time and remain in the classroom for the duration of the lecture.* Talking, eating, sleeping, checking e-mail, using a phone, reading a newspaper, preparing for another class, packing up early is disruptive to others around you and to the instructor. Though classroom participation is always welcomed, questions and comments must be relevant to the topic at hand. If you have a question or comment, raise your hand to be recognized. *Electronic devices such as cell phones, iPods, and computers must be turned off during class.* Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class.

Daily Class Schedule

Spring 2011	Date	Topics	Online assignments- due dates
Week - 1	1/11	Chapter R –review	HW 1 (86 problems) due 1/19 Quiz 1 (10problems) due 1/19
	1/13	Chapter R- review	
Week – 2	1/18	Chapter 1- review	HW 2 (66 problems) due 1/24 Quiz 2 (10 problems) due 1/25
	1/20	Sec 5.4	
Week – 3	1/25	2.1/2.2	HW 3 (36 problems) due 1/31 Quiz 3 (8 problems) due 2/1
	1/27	2.2, 2.3(# 1-30)	
Week – 4	2/1	2.3(#37-98), 2.4	HW 4(59 problems) due 2/7 Quiz 4 (9 problems) due 2/8 Review for test 1(68 problems) due 2/7
	2/3	3.1+ departmental handout More on Functions(omit operations on functions)	
Week – 5	2/8	Test # 1 (Chapter R, 1,2, 3.1,5.4)	HW 5 (26 problems) due 2/14 Quiz 5 (6 problems) due 2/15
	2/10	3.2/3.3	
Week - 6	2/15	3.4	HW 6 (36 problems) due 2/21 Quiz 6 (9 problems) due 2/22
	2/17	3.5	
Week – 7	2/22	3.6	HW 7 (28 problems) due 2/28 Quiz 7 (7 problems) due 3/1
	2/24	4.3	
Week – 8	3/1	4.4/4.5	HW 8 (49 problems) due 3/7 Quiz 8 (8 problems) due 3/8 Review for test 2 (36 problems)due 3/9
	3/3	5.1 drop date- 03/04/2011	
Week – 9	3/8	5.2	HW 9 (17 problems) due 3/21 Quiz 9 (5 problems) due 3/22
	3/10	Test # 2 (Chapter 3, 4, sec 5.1)	
Week – 10	3/15	Spring break	
	3/17	Spring break	
Week – 11	3/22	5.3	HW 11 (27 problems) due 3/28 Quiz 11 (6 problems) due 3/29
	3/24	6.1+3.1(operations on functions)	
Week -12	3/29	6.2	HW 12 (55 problems) due 4/4

	3/31	6.3	Quiz 12 (7 problems) due 4/5
Week -13	4/5	6.4	HW 13 (73 problems) due 4/11 Quiz 13 (8 problems) due 4/12
	4/7	6.5	
Week -14	4/12	6.6	HW 14 (36 problems) due 4/18 Quiz 14 (8 problems) due 4/19 Review for test 3(58 problems) due 4/18
	4/14	6.7/6.8	
Week -15	4/19	Test # 3 (Sec 5.2-5.3,chapter 6)	HW 15 (21 problems) due 4/24 Quiz 15 (4 problems) due 4/24
	4/21	12.1/12.6	
Week-16		Final week of the semester – no classes	Review for Final(104 problems) due 4/28 (noon)
	4/28	Final Exam, 2:15 – 4:45pm, room TBA	

**DEPARTMENTAL HANDOUT
MORE ON FUNCTIONS**

Find the domain of the given function

$$1) f(x) = \frac{1}{2-3x}$$

$$2) f(x) = \frac{x-2}{x^2+5x+6}$$

$$3) f(x) = \frac{2x}{3-x^2}$$

$$4) f(x) = \frac{x-1}{x^2-7x+2}$$

$$5) f(x) = \frac{-3}{x^2+1}$$

$$6) f(x) = \frac{2x+1}{x(x+1)(x-3)}$$

$$7) f(x) = \frac{4x^2}{3x^2+6x}$$

$$8) f(x) = \frac{-2}{|3x+2|-1}$$

$$9) f(x) = \frac{1-x-x^2}{4|2x-3|+1}$$

$$10) f(x) = \sqrt{\frac{1}{3}x+2}$$

$$11) f(x) = \frac{-1}{\sqrt{3-2x}}$$

$$12) f(x) = \sqrt{6+x-x^2}$$

$$13) f(x) = \sqrt{\frac{x}{1-x}}$$

$$14) f(x) = \sqrt{x^2-4}$$

$$15) f(x) = \sqrt[3]{x+2}$$

$$16) f(x) = \sqrt{3x^2-x-2}$$

$$17) f(x) = \sqrt{\frac{x}{x^2-4x-5}}$$

$$18) f(x) = \frac{5}{\sqrt{4x+1}-2}$$

$$19) f(x) = \frac{3x-1}{\sqrt{x+5}+1}$$

ANSWERS

$$1) \{x \mid x \neq \frac{2}{3}\} = (-\infty, \frac{2}{3}) \cup (\frac{2}{3}, +\infty) \quad 2) \{x \mid x \neq -3, -2\} = (-\infty, -3) \cup (-3, -2) \cup (-2, +\infty),$$

$$3) \{x \mid x \neq -\sqrt{3}, \sqrt{3}\} = (-\infty, -\sqrt{3}) \cup (-\sqrt{3}, \sqrt{3}) \cup (\sqrt{3}, +\infty)$$

$$4) \{x \mid x \neq \frac{7-\sqrt{41}}{2}, \frac{7+\sqrt{41}}{2}\} = (-\infty, \frac{7-\sqrt{41}}{2}) \cup (\frac{7-\sqrt{41}}{2}, \frac{7+\sqrt{41}}{2}) \cup (\frac{7+\sqrt{41}}{2}, +\infty)$$

$$5) (-\infty, +\infty) \quad 6) \{x \mid x \neq -1, 0, 3\} = (-\infty, -1) \cup (-1, 0) \cup (0, 3) \cup (3, +\infty)$$

$$7) \{x \mid x \neq -2, 0\} = (-\infty, -2) \cup (-2, 0) \cup (0, +\infty) \quad 8) \{x \mid x \neq -\frac{1}{3}, -1\} = (-\infty, -1) \cup (-1, -\frac{1}{3}) \cup (-\frac{1}{3}, +\infty)$$

$$9) (-\infty + \infty) \quad 10) \{x \mid x \geq -6\} = [-6, +\infty) \quad 11) \{x \mid x < \frac{3}{2}\} = (-\infty, \frac{3}{2})$$

$$12) \{x \mid -2 \leq x \leq 3\} = [-2, 3] \quad 13) \{x \mid 0 \leq x < 1\} = [0, 1)$$

$$14) \{x \mid x \leq -2 \text{ or } x \geq 2\} = (-\infty, -2] \cup [2, +\infty) \quad 15) (-\infty, +\infty)$$

$$16) \{x \mid x \leq -\frac{2}{3} \text{ or } x \geq 1\} = (-\infty, -\frac{2}{3}] \cup [1, +\infty)$$

$$17) \{x \mid -1 < x \leq 0 \text{ or } x > 5\} = (-1, 0] \cup (5, +\infty)$$

$$18) \{x \mid x \geq -\frac{1}{4}, x \neq \frac{3}{4}\} = [-\frac{1}{4}, \frac{3}{4}) \cup (\frac{3}{4}, +\infty)$$

$$19) \{x \mid x \geq -5\} = [-5, +\infty)$$



Dear Student:

In this course you will be using MyMathLab – an online resource to help you assess your math skills, do homework, take tests, view tutorial videos, and more!

What you need to begin:

- **A Student Access Kit** (packaged with a new textbook or available for purchase online with a major credit card).
- **A valid email address**
- **Your school's zip code:** 33199

In addition, your instructor will provide you with:

- **A "Course ID" Number:** orjuela77335 (if you attended the 8am class)
orjuela32595 (if you attended the 12:30 class)

Student Registration:

- Enter <http://www.coursecompass.com> in your Web Browser.
- Under **Students**, click the "**Register**" button.
- Read the "Before you start" information and click **Next**.
- Enter your **Course ID** as provided by your instructor and click **Next**.
- Confirm that this is your course and click "**Register with a Student Access Code.**" *If you do not have a code click "Buy Course Access Online" and follow those steps to purchase and register.*
- Read the License Agreement and Privacy Policy and click "**I Accept.**"
- Select "**No, I am a New User**" and type in your **Access Code** in the fields provided.
- Enter your School's **Zip Code**, select your **Country** and click **Next**.
- Enter your **Name** and **Email** and select **Your School**
- Create your **Login Name** and **Password**, answer the **Security Question** and click **Next**.

Once successful, you will receive a **Confirmation & Summary** screen; write down your confirmed login/password in case you forget it! A confirmation email will also be sent to you - if you use a Spam email blocker, be sure to allow emails from Pearsoned.com.

Logging In:

- Go to <http://www.coursecompass.com> and click the **Log In** button for Students.
- Enter the **login name** and **password** you just created and click **Log In**.
- You will see the name of your **course** listed on the left; click that link to access your course and Announcements.
It's a good idea to bookmark the www.coursecompass.com URL.

IMPORTANT: The first time you enter the site from your personal computer **and** anytime you use a new computer, click on the software **Installation Wizard** on the Announcements page. This wizard will walk you through installing the software that you will need to use all resources. Note: Software may already be installed on the school's lab computers; check with your lab administrator.

Need Help?

MyMathLab allows you access to our Tutor Center at 1-888-777-0463. Visit www.pearson tutorservices.com for hours and available services.

For technical assistance, go to http://www.mymathlab.com/contactus_stu.html for student "getting started" information, to fill out an online request form, or to use Pearson's live "Chat" feature to talk with a member of the support team.

We wish you success in your course!

MyMathLab / MyStatLab Student Grace Period Instructions

Dear Student,

You have been given a grace period access code that allows you to use MyMathLab for 21 days.

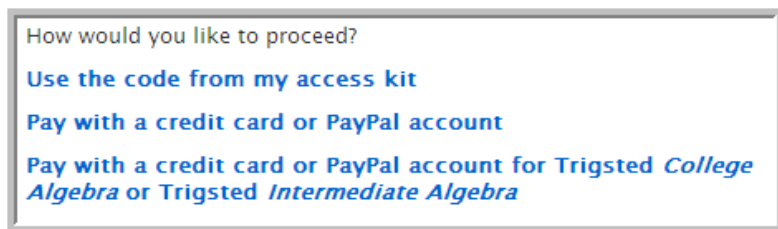
To get access to MyMathLab for this grace period:

1. Go to www.coursecompass.com.
2. Click **Register** under 'Students' on the [CourseCompass](#) home page.
3. Click **Next** on the Before You Start page.
4. Follow the instructions to register and enroll. You will be asked to:
 - o Enter your course ID and click **Find Course**.
 - o Verify the course information and click **Access Code**.
 - o Type this grace period access code in the space provided : **GPMLL-DROSS-TOXIC-HOOGH-PETRI-HONES**
 - o Click **Next** and follow the instructions to complete the registration
5. Review the Confirmation & Summary page and print the page for your records. Click **Log In Now** to enter your course.

To upgrade to full MyMathLab or MyStatLab course access:

Before the grace period expires, you must upgrade your subscription to continue accessing your course. To do this, go to the [Grace Period Subscription Upgrade](#) page. You can upgrade your subscription either by paying with a credit card or PayPal account, or by entering the MyMathLab or MyStatLab access code from the access kit you purchased at the bookstore.

1. Go to the [Subscription Upgrade](#) page: <http://www.mymathlab.com/grace-period-payment-page>
2. Choose your upgrade method:



3. Follow the registration instructions.

Note: On the Access Information screen, **select "Yes" under "Do you have a Pearson Education account?"** and type in your existing MyMathLab or MyStatLab login name and password.

What happens if I don't upgrade before the end of the 21-day grace period?

If you do not upgrade your subscription within the 21-day grace period, your subscription will expire and you will not have access to your MyMathLab or MyStatLab course. You may also lose access to other CourseCompass courses you are taking.

If you do not want to continue with your MyMathLab or MyStatLab course, contact [Customer Technical Support](#) at <http://247pearsoned.custhelp.com> and ask to be removed from the course so you don't lose access to your other CourseCompass courses.

For your Registration: 1) Go to www.coursecompass.com, under student click Register, read the “Before you start” information and click Next, 2) Enter your **Course ID** and click “Find Course”, 3) Type your Access Code and click Next. 4) Read the “License Agreement and Privacy Policy” and click “I Accept”. 5) Answer Yes/No/Not Sure if you have a Pearson Education Account 6) Simply follow the registration screens and enter your information as prompted.

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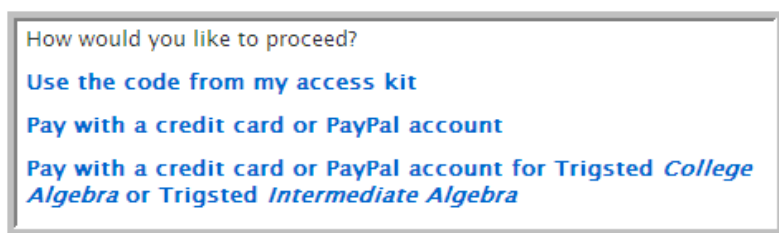
1) Go to www.coursecompass.com, 2) Click **Register** under ‘Students’ on the [CourseCompass](http://www.coursecompass.com) home page, 3) Click **Next** on the Before You Start page. 4) Follow the instructions to register and enroll. You will be asked to:

- Enter your course ID and click **Find Course**.
- Verify the course information and click **Access Code**.
- Type this grace period access code in the space provided : **GPMML-DROSS-TOXIC-HOOGH-PETRI-HONES**
- Click **Next** and follow the instructions to complete the registration

5) Review the Confirmation & Summary page and print the page for your records. Click **Log In Now** to enter your course.

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1. Go to the [Subscription Upgrade](#) page: <http://www.mymathlab.com/grace-period-payment-page>
2. Choose your upgrade method:



3. Follow the registration instructions.

Note: On the Access Information screen, select “**Yes**” under “**Do you have a Pearson Education account?**” and type in your existing MyMathLab login name and password.

What happens if I don’t upgrade before the end of the 21-day grace period? If you do not upgrade your subscription within the 21-day grace period, your subscription will expire and you will not have access to your MyMathLab or MyStatLab course. You may also lose access to other CourseCompass courses you are taking.

If you do not want to continue with your MyMathLab or MyStatLab course, contact [Customer Technical Support](#) at <http://247pearsoned.custhelp.com> and ask to be removed from the course so you don’t lose access to your other CourseCompass courses.