

PRE CALCULUS ALGEBRA- MAC 1140 (TR)
COURSE SYLLABUS
FALL 2017

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NOTE: This syllabus is subject to change

COURSE BASICS

Prerequisites: a C or better in College Algebra, MAC 1105, or appropriate current score on the ALEKS placement test (for students with no prior college coursework only)

Course Description: MAC 1140 will prepare you for Calculus. The skills you learn in this course will also be relevant for your other science courses. The main topics include polynomial, rational, exponential and logarithmic functions, determinants, Cramer's Rule, conic sections, arithmetic and geometric sequences, and binomial theorem.

Course Objectives: After finishing this course you should: (1) have a good understanding of the concept of a function and its graph; (2) recognize, graph and discuss the properties of polynomial, rational, exponential and logarithmic functions; (3) apply different techniques, including Cramer's rule, to solving systems of equations; (4) recognize and graph a parabola, ellipse, and hyperbola (i.e. conics); (5) find a formula for a specific sequence of numbers, recognize arithmetic and geometric sequences, and compute the sum of the first n-terms of such sequences; and (6) expand a power of a binomial using the Binomial Theorem.

MATERIALS NEEDED

Textbook: Algebra & Trigonometry by R. Blitzer, 6th edition, packaged with MyLabsPlus access code or MyLabsPlus Access Code alone (MyLabsPlus program contains an electronic textbook version). ISBN for textbook + access code : 9781323656495; ISBN for access code alone: 9781323739778

Access code to MyLabsPlus :

If you took MAC 1105, MAC 1140, MAC 1114 or MAC 1147 at FIU after Fall 2015, you will receive a code in the first two weeks of the semester after it is verified that you purchased a code already. You will be asked to complete a quick survey and provide relevant information. Otherwise, you must purchase a code. You can purchase an access code at FIU bookstore together with the textbook or as standalone item. Or you can purchase it online directly from Pearson while attempting to use the MyLabs Plus site (valid credit card required) - this is the cheapest option. **Please be advised that you MUST purchase a code with a specific ISBN or it will not work for the course.** *Note: Pearson can only support access cards purchased from the bookstore and directly through the publisher. Any issues that arise from materials purchased from a third-party vendor (Amazon, Chegg, eBay, etc) must be handled by that particular company. Access cards purchased through third-party vendors will not be replaced by Pearson. This policy includes standalone access cards and access cards included within a packaged bundle.*

If you are not able to purchase an access code immediately, you can use a **temporary access code**. A temporary access code can be obtained directly from the MylabsPlus site. A temporary access code is valid for ONLY 14 calendar days and it allows you to get started with your assignments on the first day of classes. After the code expires you will be prompted to enter the permanent code or purchase the code using a credit card. You will not be allowed to continue your course until a permanent code is entered. You cannot buy/enter a permanent code until the temporary code expires.

Dedicated notebook (recommended): Use it for your class notes and homework assignments. It will be very helpful when preparing for the tests.

KEYS TO SUCCESS

To be successful in this course you need to:

- **Complete all assignments on time.** Aim for 100% on each of the assignments. Every point at the end of the semester counts!
- **Write out complete solutions in all assignments**, as if you were taking a test. Get into a habit of showing complete work, which is required on all tests. Math is learned by **doing** problems. Watching videos and reading the textbook, while important in the learning process, will not allow you to see which parts are challenging **for you**. If your answer is not correct, review your class notes and start over.
- **Be an active participant in the classroom** – If you don't understand something, ask questions. Take full advantage of the in-class time.
- **Be consistent with your work and study time** – math takes practice and time to process. Make it a habit (early in the semester) to set time to work *regularly* on the course assignments and material. Work with a friend. Form a study group. An hour everyday is better than cramming for 4 hours at a time.
- **Get help early and often:** If you are having difficulties or need support, reach out to the instructor and your classmates. Use e-mail or stop by office hours. Go to campus tutoring sessions. All students need help at some point, do not be shy about getting the help you need. **We want you to succeed!**
- **Take advantage of campus resources:** Visit the University Learning Center (GL 120 in MMC/ AC1 160 in BBC) or the AAA Tutorial Program for free tutoring (GC 267 in MMC/ WUC 253 in BBC). Look at sample tests or reviews in the Math Department website: <http://mathstat.fiu.edu/useful-information/math-resources/pre-calculus-algebra/>

COURSE DETAILS

Online Homework (7% of the grade): Your online course assignments are available at <http://fiu.mylabsplus.com>. Your **username is your panther ID**. Use "Forgot your password?" link to obtain your password. You will be able to access the site, but to gain access to assignments you must purchase an access code for MyLabsPlus. Online problems can be attempted an infinite number of times, but must be completed by 11:59 PM on the assigned due date. It is your responsibility to track the due dates. **Late submissions will not be accepted under any circumstances** (a grade of 0 will be assigned), so please plan accordingly and don't wait until the last minute. At the end of the semester, the homework with the lowest grade will be dropped.

Online Quizzes (10% of the grade): To take a quiz you have to complete associated homework assignments (usually two assignments per week) with a score of 80% or more. If you do not score **at least 80% on EACH homework assignment, you will not be able to take the associated quiz** and therefore you will receive a 0% on that quiz. You can take each quiz up to 3 times and only the highest score will be recorded. At the end of the semester, the quiz with the lowest grade will be dropped.

Offline Homework (6% of the grade): Throughout the semester, you will have nine offline homework assignments. They have to be handed in, in class, on the due date. At the end of the semester, the offline hw with the lowest grade will be dropped.

Lab Participation (5% of the grade): Each week, between Monday and Thursday, you are required to spend at least **1 hour in the lab, GL 263**. You need to complete your lab hour requirement **by each Thursday at 8 PM**. While you may use the lab on Fridays and Sundays, credit will be given only for Monday through Thursday visits. The time can be continuous or broken into smaller time periods. The total time you spend in the lab will be

recorded and if it is smaller than 1 hour = 60 minutes (59 IS smaller than 60), you will get 0 for that period. At the end of the semester, two lowest lab participation scores will be dropped.

Exams (72% of the grade): There will be four tests (see the schedule, worth 13% each) and a comprehensive final exam (worth 20%).

Note: Deadlines will not be extended under any circumstances. All online assignments are due at midnight on the due day. The pre-class assignments are due at the beginning of class and in-class worksheets at the end of class. 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.

COURSE POLICIES

Grading policy:

Your grade will depend on your performance on tests and the online and offline homework and quizzes. Keep in mind that 72% of your grade is determined by your performance on tests

Course Requirements	Number of Items	Weight
Online Homework Assignments	26	7%
Online Quizzes	14	10%
Offline Homework Assignments	9	6%
Lab Participation	At least 15 hours	5%
Tests	4	52%
Final Exam	1	20%
Total		100%

- To get a full credit for a problem on a test you **must show your work. An answer alone, even correct, will get no credit.**
- The lowest scores on quizzes and homework assignments will be dropped at the end of the semester. The score on the final will replace the lowest test score, if it is to your advantage.
- The final will NOT replace a 0 that you get for missing a test.

Your final grade will be assigned according to the following scale. All grades will be available in Mylabsplus, so you can monitor your progress.

Letter	Range (%)	Letter	Range (%)	Letter	Range (%)
A	Above 93	B-	79 - 82		
A-	89 - 92	C+	75 - 78	D	59 - 68
B+	86 - 88	C	69 - 74	F	0 - 58
B	83 - 85				

Make-up Policy: There will be no make-up tests. If you miss a test due to illness or other emergency and provide supporting documentation, your final exam will count in place of the missed test. In this case, the option of replacing the lowest test score **will not be applied**. There **are no make-ups for online and offline assignments**.

Class Attendance Policy: You are expected to attend all classes. **Attendance will be taken daily.** It is your responsibility to complete all assignments on time regardless of whether or not you were present in the class.

Lab Attendance Policy : You are required to spend at least 1 hour each week (**Monday through Thursday**) in MasteryMathLab, GL 263. You need to complete your lab hour requirement by each Thursday at 8 PM. While you may use the lab on Fridays and Sundays, credit will be given only for Monday through Thursday visits. The time can be continuous or broken into smaller time periods. The total time you spend in the lab will be recorded and if it is smaller than 1 hour = 60 minutes (59 IS smaller than 60), you will get 0 for that period.

The **hours** you spend in the lab **do not “roll over”** to the next period. If you spend 2 hours in one week, you still have to spend a minimum of 1 hour in the next week. There is also no partial credit for earning less than required 1 hour. When a time period contains a holiday, the minimum number of required hours is still 1, unless notified by faculty.

Calculator Policy: Use of graphing calculators is prohibited in this course. The scientific calculator, TI- 30XA will be used occasionally but **not on the tests.**

Mastery Math Lab (GL 263) Policies:

- Lab is open Monday through Friday, 8 am - 8 pm and Sunday, 1-6 pm.
- To access the lab, you must **have your Panther Card**. It will be used to sign-in and out of the lab, recording your lab hours.
- You are **responsible for tracking your own hours**. You will know how much time you've spent in each visit. Keep a record of your hours in your notebook. This is good advice.
- You need to **sign out whenever you leave the lab**. This includes taking a phone call or visiting the restroom.
- Student conduct which disrupts the learning process may lead to disciplinary action and/or removal from the lab. Removal from the lab for disregarding lab policy will result in a 0 for your lab hours for that week, even if all required hours have been completed.
- While in the lab, **you are expected to be actively working on your MLP assignments**. Use this time to get help, from LAs and faculty, on challenging questions. This time is designed to help you with the course content.
- **No food, drink, or gum is allowed in the lab. Not even water!** If you are hungry or need a coffee boost, take a break! It will be good for your brain anyway.
- Like on an airplane, **all electronic devices must be turned off and stowed away**. There is a hook under the desk for your things.
- Please remember that the lab will be open Monday through Friday 8am—8pm and Sunday 1pm—6pm. It might happen that you will have to wait before a computer becomes available – especially on a Friday at the beginning of the semester. Please plan accordingly. Do not wait until the last day to complete your lab hours.
- **Please bring your math notebook** if you plan to work on your homework. Take notes for future reference. If you plan to take a quiz, use a clean sheet of paper.
- Listening to music. Although all the research tells us that listening to music while working is bad (see the work of Richard E. Mayer for clinical studies on this), we know that many of you feel the need to do so. We have allowed access to the radio websites Pandora and Spotify. You may bring wired earphones and access these sites. You will not be allowed to access your own personal electronic devices (unfortunately we tried this and students took advantage of that privilege so we have found a reasonable compromise).

Early Alert: In an effort to help you succeed in your academic courses, FIU utilizes an Early Alert system. Instructors are now able to notify students' academic advisors if there are concerns about class performance. If an alert is submitted, your academic advisor will send you a message via your Student Dashboard (accessed via your MYFIU page) to discuss ways to improve your performance. Please respond to any communication you receive from your academic advisor about an early alert. Our goal with this program is to help you succeed by identifying any issues as early as possible and working to address them.

Incomplete Grade Policy: The incomplete grade is given to a student who has substantially and successfully 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 with a DR grade is October 30

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 excuse 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.

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 class, be on time and remain in the classroom for the duration of the class period. Eating, sleeping, checking e-mail, using a phone or laptop, reading a newspaper, preparing for another class, packing up early is disruptive to others around you and to the instructor. All classroom participation must be relevant to the topic at hand. Electronic devices such as cell phones, iPods, tablets and computers must be turned off and put away during class. Student conduct which disrupts the learning process shall not be tolerated and may lead to disciplinary action and/or removal from class.

Post – Irma Daily Class Schedule (TR)

Fall 2017	Date	Sections covered	Assignments
	8/22	Class policies; 2.1- function- definition, function notation; domain; difference quotient (review)	
	8/24	2.1- graphs of functions: Vertical Line test, values, domain, range, intercepts; graphs of basic functions (review) 2.2- properties of functions and their graphs; increasing/decreasing; even/odd; piecewise functions (review)	
	8/29	2.5 – Graphing using transformations	
	8/31	2.6 – operations of functions: sum/difference/product/quotient/composition, de-composing functions (review)	
	9/5	2.7 – One-to one functions ; Inverse functions- finding the inverse and its graph (review)	
	9/7	IRMA	
	9/12	IRMA	
	9/14	IRMA	
	9/19	3.2- Polynomial functions: definition, end behavior, definition of a zero and its multiplicity	
	9/21	3.2- Graphing polynomial functions using zeros and their multiplicities and the end behavior 3.3 – Dividing polynomials: long division, synthetic division	
	9/26	TEST 1 (Chapter 2, sec 3.2)	
	9/28	3.3 – Dividing polynomials: long division, synthetic division, Remainder and Factor Theorems 3.4 – Zeros of a polynomial function: Rational Zeros Theorem	
	10/3	3.4 – Zeros of a polynomial function: Rational Zeros Theorem; Solving polynomial equations; Fundamental Theorem of Algebra	
	10/5	3.5 – Rational Functions; domain; arrow notation; asymptotes	

Week – 8	10/10	3.5 – Graphing Rational functions(include transformations)	HW 3.5B(15 problems) due 10/13 HW 3.6 (19 problems) due 10/16 Quiz 7 (10 problems) due 10/17 Offline HW 4 (graphing rational functions) due 10/17
	10/12	3.6- Polynomial and Rational inequalities	
	10/17	Test 2 (chapter 3)	
	10/19	4.1 – Exponential functions: definition and graphing using transformations	
	10/24	4.2 – Logarithmic functions	
	10/26	4.3- Properties of logarithms	
	10/31	4.4 –Exponential and Logarithmic equations	
	11/2	10.1 - Ellipse	
	11/7	Test 3	
	11/9	10.2- Hyperbola	
	11/14	10.3 - Parabola	
	11/16	11.1 -Sequences and sigma notation	
	11/21	11.2-12.3 Arithmetic and Geometric sequences	
	11/23	Thanksgiving	
	11/28	11.5- The Binomial theorem	
	11/30	8.1, 8.2- Systems of linear equations: substitution and elimination method; 8.4 – Nonlinear systems	
	12/5	Test # 4	
	12/7	9.5 – Determinants and Cramer’s Rule	
Week-17	12/13	Final Exam (5 - 7pm)	