PRE CALCULUS ALGEBRA- MAC 1140 (BBC- MWF)
COURSE SYLLABUS
SPRING 2018

Instructor: Ondrej (Andrew) Zjevik
Office #: AC1 - 389
Phone #: TBD

E-mail: ozjevik@fiu.edu
Office Hours:
MWF: 11:15AM-12:45PM
TR: 10:30-11:15AM, 1:15-2:00PM

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 in Fall 2017, you will have an automatics access to the program. 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 MyLabsPlus 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 codes 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 codes purchased through third-party vendors will not be replaced by Pearson. This policy includes standalone access codes and access codes 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 every day 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 and 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 (11% 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 (7 % 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.

Exams (72% of the grade): There will be five tests (see the schedule, worth 11% each) and a comprehensive final exam (worth 20%).

Participation (3% of the grade): This component of the grade includes class attendance and participation in class activities.

Note: **Deadlines will not be extended**. All online 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.

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	29	7%
Online Quizzes	14	11%
Offline Homework Assignments	9	7%
Participation		3%
Tests	5	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.

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**.

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 March 19.

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.

TENTATIVE Daily Class Schedule

SPRING 2018	Date	Sections covered	Assignments
Week - 1	1/8	Class policies; 2.1- function- definition, function notation; domain; difference quotient (review)	HW 2.1 (24 problems) due 1/16 HW 2.2 (33 problems) due 1/16 Quiz 1 (10 problems) due 1/17 Offline HW 1 (graphing a piecewise functions) due 1/17
	1/10	2.1- graphs of functions: Vertical Line test, values, domain, range, intercepts; graphs of basic functions (review)	
	1/12	2.2- properties of functions and their graphs; increasing/decreasing; even/odd; piecewise functions (review)	
Week – 2	1/15	**MLK Day- No school**	HW 2.5 (27 problems) due 1/21 Quiz 2 (10 problems) due 1/22 Offline HW 2 (graphing using transformations) due 1/24
	1/17	2.5- Graphing using transformations (review)	
	1/19	2.5- Graphing using transformations (review)	

Week – 3	1/22	2.6 – operations on functions: sum/difference/product/quotient/composition, de-composing functions (review)	HW 2.6 (24 problems) due 1/24 HW 2.7 (20 problems) due 1/28 Quiz 3 (10 problems) due 1/29
	1/24	2.7 – Inverse functions (review)	
	1/26	3.2- polynomial functions: definition, end behavior, definition of a zero and its multiplicity	HW 3.2A (21 problems) due 1/30
Week – 4	1/29	**Test 1 (Chapter 2)**	HW 3.2B (13 problems) due 2/4 HW 3.3 (26 problems) due 2/4 Quiz 4 (10 problems) due 2/5 Offline HW 3 (graphing polynomial functions) due 2/5
	1/31	3.2- Graphing polynomial functions using zeros and their multiplicities, end behavior	
	2/2	3.3 – Dividing polynomials: long division, synthetic division, Remainder and Factor Theorems	
Week – 5	2/5	3.4 – Zeros of a polynomial function: Rational Zeros Theorem	HW 3.4 A (17 problems) due 2/6 HW 3.4 B (12 problems) due 2/11 HW 3.5A(29 problems) due 2/11 Quiz 5 (10 problems) due 2/12
	2/7	3.4- Solving polynomial equations; Fundamental Theorem of Algebra	
	2/9	3.5 – Rational Functions; domain; arrow notation; vertical, horizontal and slanted asymptotes	
Week - 6	2/12	3.5- Graphing rational functions	HW 3.5 B(15problems) due 2/14 HW 3.6 (19problems) due 2/18 Quiz 6 (10 problems) due 2/19 Offline HW 4 (graphing rational functions) due 2/16
	2/14	3.6- Polynomial inequalities	
	2/16	3.6 –Rational inequalities	
Week – 7	2/19	**Test 2 (Chapter 3)**	HW 4.1 (28 problems) due 2/25 HW 4.2A (19 problems) due 2/25 Quiz 7 (9 problems) due 2/26 Offline HW 5 (graphing exponential functions) due 2/26
	2/21	4.1 – Exponential functions: definition and graphing using transformations	
	2/23	4.2 – Logarithmic functions: definition of logarithm, exponential and logarithmic forms; common and natural logarithms	
Week – 8	2/26	4.2- Logarithmic functions: domain and graphing using transformations	HW 4.2B (23 problems) due 2/28 HW 4.3 (28 problems) due 3/4 HW 4.4A(16 problems) due 3/4 Quiz 8 (10 problems) due 3/5 Offline HW 6 (graphing logarithmic functions) due 3/2
	2/28	4.3 - Properties of logarithms; change of the base formula	
	3/2	4.4 – Exponential equations	
Week – 9	3/5	4.4- Logarithmic equations	HW 4.4B(20 problems) due 3/7 HW 10.1A(16 problems) due 3/11 Quiz 9 (10 problems) due 3/12
	3/7	10.1 – Ellipse with center at (0,0)	
	3/9	**Test 3 (Chapter 4)**	

Week – 10	3/12	SPRING BREAK	
	3/14	SPRING BREAK	
	3/16	SPRING BREAK	
Week – 11	3/19	10.1 – Ellipse with center at (h,k) **DROP DAY**	HW 10.1B(16 problems) due 3/21 HW 10.2 (27problems) due 3/25 Quiz 10 (10 problems) due 3/26 Offline HW 7 (graphing an ellipse) due 3/23 Offline HW 8 (graphing a hyperbola) due 3/28
	3/21	10.2 – Hyperbola with center at (0,0)	
	3/23	10.2 -Hyperbola with center at (h,k)	
Week -12	3/26	10.3- Parabola with vertex at (0,0)	HW 10.3 (27 problems) due 4/1 Quiz 11 (5 problems) due 4/2 Offline HW 9 (graphing a parabola) due 4/2
	3/28	10.3 – Parabola with vertex at (h,k)	
	3/30	11.1 – Sequences: definition, finding the terms, finding formula for n-th term; factorial	
Week -13	4/2	11.1 – Sigma notation	HW 11.1 (34 problems) due 4/8 HW 11.2(19 problems) due 4/8 Quiz 12 (10 problems) due 4/9
	4/4	**Test 4 (Chapter 10)**	
	4/6	11.2 Arithmetic sequence	
Week -14	4/9	11.3- Geometric sequence	HW 11.3(21 problems) due 4/11 HW 11.5 (20 problems) due 4/15 HW 8.1, 8.2& 8.4 (24 problems) due 4/15 Quiz 13 (9 problems) due 4/16
	4/11	11.5 – The Binomial Theorem	
	4/13	8.1, 8.2 Systems of linear equations; substitution and elimination method **;** 8.4 Nonlinear systems	
Week -15	4/16	9.5 - Determinants	HW 9.5 (21 problems) due 4/19 Quiz 15 (10 problems) due 4/20
	4/18	9.5 – Cramer's Rule	
	4/20	**Test 5 (Chapter 11, sec 9.5)**	
Week-16	4/25	**Final Exam (5 -7 pm)**	