MAC 1140 Precalculus Algebra
Professor J. Anfinson
Spring 2023-CRN 20092
Thursdays 11:30am-12:45pm
Room: 4-205

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Office Hours: Monday through Friday: 8:00am-10:00am (Canvas/Email/Zoom)

Course Description: Precalculus Algebra
Prerequisite: Minimum grade of C in either MAC 1105 or appropriate score on an approved assessment. This course is an algebra preparation for the Calculus sequence. Topics include a symbolical, graphical, and numerical analysis of polynomials, exponential, logarithmic, power, and rational functions; matrices, sequences, induction, binomial theorem, and conic sections. Applications emphasizing connections with other disciplines and the real world will be included. Technology tools will be used in addition to analytical methods. Gordon rule course. A minimum grade of C is required if MAC 1140 is used to satisfy Gordon rule and general education requirements.

Required ALEKS Access Code: Miller, Precalculus, 1st edition, ALEKS 360, 2017
You are responsible for registering for ALEKS **during the 1st week of class. You are eligible for temporary free access through McGraw Hill for 14 days (see "Financial Aid Access Code in Canvas").**

*Note: Purchasing from the Valencia bookstore (instead of digitally from www.aleks.com directly) may result in a different price and shipping delays.

Required Calculator: A physical calculator is required for testing (not your cell phone). Whie graphing utilities (TI-84+ and Desmos.com/calculator) are used for demonstrations and are strongly recommended, scientific calculators will be sufficient for this class.

Attendance: Attendance is taken, expected and encouraged, but is not graded.
**Please note that this is a "flipped classroom: and students expecting a lecture in each class might prefer to take a traditional "face-to-face" class instead. Students will need to watch lectures, take notes, and complete homework/quizzes/knowledge checks at home in Canvas/ALEKS BEFORE coming to class, as class time will not be spent lecturing, but rather applying what you have learned in group problem-solving activities.* Ultimately, math is not a spectator sport; engaging in class, practicing regularly, and preparing for tests is essential for your success!

ALEKS: You are responsible for registering your ALEKS account and completing your Initial Knowledge Check **during the first week of class (you may use free two-week access with Financial Aid Code listed on the Canvas "Start Here" page).** You can access all ALEKS assignments, gradebook and other resources by going directly to www.aleks.com.

ALEKS Mastery Practice (20% of Grade)

- In addition to completing notes and watching videos made by your professor in Canvas, regular practice and completion of weekly learning modules (**due on Saturdays by 11:59pm**) in ALEKS is crucial to your success in this course. After working for about 5 hours in ALEKS AND completing 20 new topics, you will be prompted to take a **Progress Knowledge Check** to see which topics you have mastered and which ones you will need to keep working on throughout the course. Most students will need to spend at least 10-15 hours per week practicing to succeed. Students are encouraged to work ahead!

- Before each test, students should review the topics mentioned in their **Test Reminder Announcement** in Canvas and *should time themselves* doing the suggested eBook problems. To further encourage students to strategically practice before the test, students are assigned **Test Review Modules** in ALEKS based on their mastery level of the topics so far, to review areas that still need practice.

- After taking an in-class chapter test, students will be prompted in ALEKS to take a **required Comprehensive Post-Test Knowledge Check** (similar to the Initial Knowledge Check) where students will have the opportunity to see how many of the (entire) course topics they have already mastered. This could either reduce or increase the amount of topic objectives you will need to complete in the upcoming module. *ALEKS is adaptive and thus will **not** make you practice what you already know, so be sure to take these Knowledge Checks seriously to help you use your time most efficiently each week.* It's perfectly normal to see concepts and problems on these comprehensive checks which are unfamiliar to you. ☺

Online Quizzes (10% of Grade): There will be **5 quizzes** given throughout the semester. The quizzes will be given **online through ALEKS at home** and it is the *student's responsibility to be aware of due dates*. You will have **two attempts at each quiz**. The lowest of the 5 quizzes will be dropped at the end of the semester.

Chapter Tests (50% of Grade): There will be **5 in-class tests** throughout the semester. The topics covered by each test are described in the schedule and in Canvas announcements. *Students are strongly encouraged to review homework and make themselves timed "practice tests" at home (composed of homework problems similar to those described in study guide reminder email sent out the week prior to the test).* While NO make-up tests will be given, I will replace a missing (or low) test score with the final exam grade PROVIDED THAT YOU GET AT LEAST A 70% ON THE FINAL EXAM.

Final Exam (20% of Grade): The cumulative final exam will be *in our classroom* on:
Thursday, April 27th: 10:00am-12:30pm

Grading: Your grades will be based on the following weighted distribution:

Component	Weight
Average of 5 In-Class Tests	**50%**
Average of best 4 (of 5) Quizzes (in ALEKS)	**10%**
ALEKS Mastery Practice	**20%**
Cumulative Final Exam	**20%**

All assignment grades will be posted in the *ALEKS Gradebook (overall in Canvas).*

Grading Scale:

90 – 100 A 80 – 89 B 70 – 79 C 60 – 69 D 59 or below F

Course Learning Outcomes

- Solve systems of equations and inequalities using various methods.
- Perform matrix operations.
- Solve polynomial and rational inequalities graphically and algebraically.
- Be given an applied problem and make an algebraic or graphical representation that describes the situation and solve the problem.
- Graph an equation of a conic section.
- Convert general form of a conic section to standard form.
- Graph polynomials using rational zeros, end behavior, turning points, etc.
- Graph rational functions using asymptotes, intercepts, etc.
- Graph any function using transformations.
- Graph a given piecewise function.
- Find an appropriate equation to represent a given graph.
- Use the definition of sequence/series to generate terms or given terms find the formula for the nth general term.
- Find the sum of a series.

Important Dates

- Withdrawal Deadline: The deadline for withdrawing from class with a grade of "W," if you are eligible to do so, is on **March 24th** for Full Spring 2023 classes. After the deadline you will not be permitted to withdraw yourself from the class. Your professor will NOT withdraw you from the class (after the No Show Period). For a complete Valencia policy overview, visit https://valenciacollege.edu/students/business-office/policies.php

- College Closed: The College will be closed on **January 16th** (MLK Jr. Day), **February 10th** (Learning Day), and **March 13th - 19th** (Spring Break)

Resources: Your instructor is interested in your success in this class. Please ask questions regularly! Many students of mathematics find it extremely helpful to form study groups with their classmates. This practice is highly recommended. For more information on how to access tutoring and library research assistance, please visit: https://valenciacollege.edu/students/learning-support/west/tutoring/

Academic Integrity: Honesty and integrity reward you in many ways, including avoidance of the grade of zero that is assigned to any student who cheats on any test or assignment. For Valencia's Academic Integrity policy, visit: https://valenciacollege.edu/students/disputes/academic-integrity.php

Valencia Core Competencies:

Valencia Community College wants graduates to possess and demonstrate a set of global competencies including the ability to **THINK, COMMUNICATE, VALUE AND ACT**. In an effort to help you acquire and improve your ability to demonstrate the competencies this course will include activities that require you to:

1. Think clearly, critically and creatively.
2. Communicate with others in written and verbal form.
3. Make reasoned value judgments and responsible commitments.
4. Act purposefully, reflectively and responsibly.

Special Accommodations:

Students with disabilities who qualify for academic accommodations must provide a letter from the Office for Students with Disabilities (OSD) and discuss specific needs with the professor, preferably during the first two weeks of class. The Office for Students with Disabilities determines accommodations based on appropriate documentation of disabilities (West Campus SSB 102, extension 1523 https://valenciacollege.edu/students/office-for-students-with-disabilities/).

Student Resource for Assistance: Valencia College is interested in making sure all our students have a rewarding and successful college experience. To that purpose, Valencia students can get immediate help with issues dealing with stress, anxiety, depression, adjustment difficulties, substance abuse, time management as well as relationship problems dealing with school, home or work. BayCare Behavioral Health Student Assistance Program (SAP) services are free to all Valencia students and available 24 hours a day by calling (800) 878-5470. Free face-to-face counseling is also available.

Tentative Schedule for Mixed Mode Spring 2023 Course:

Week	In-Class Activities (Thursdays)	ALEKS At-Home Deadlines
1	1/12-Intro (Bring your laptops/IPADs)	**Notes, Videos & HW: 1.7, 2.2, 2.3** "Initial K.C." due in ALEKS: **Wed. 1/11** Week 1 Topics Due in ALEKS: **Sat. 1/14**
2	1/19-Test 1 Review Activity *(Review problems posted in Canvas)*	**Notes, Videos & HW: 2.4, 2.5, 2.6, Review** Quiz 1 due in ALEKS: **Wed. 1/18** Week 2 Topics Due in ALEKS: **Sat. 1/21**
3	***1/26-Test 1***	**Notes, Videos & HW: 3.2** Test 1 Review due in ALEKS: **Wed. 1/25** Post-Test 1 K.C. Due in ALEKS: **Fri. 1/27** Week 3 Topics Due in ALEKS: **Sat. 1/28**
4	2/2-Ch. 3 Problem-Solving Day *(Applications of Exponential Functions)*	**Notes, Videos & HW: 3.3, 3.4, 3.5** Week 4 Topics Due in ALEKS: **Sat. 2/4**
5	2/9-Test 2 Review Activity *(Review problems posted in Canvas)*	**Notes, Videos & HW: 3.6, Review** Quiz 2 due in ALEKS: **Wed. 2/8** Week 5 Topics Due in ALEKS: **Sat. 2/11**
6	***2/16-Test 2***	**Notes, Videos & HW: 9.1, 9.2, 9.3** Test 2 Review due in ALEKS: **Wed. 2/15** Post-Test 2 K.C. Due in ALEKS: **Fri. 2/17** Week 6 Topics Due in ALEKS: **Sat. 2/18**
7	2/23- Test 3 Review Activity *(Review problems posted in Canvas)*	**Notes, Videos & HW: 9.4, 9.5, 8.3, 8.5, Review** Quiz 3 due in ALEKS: **Wed. 2/22** Week 7 Topics Due in ALEKS: **Sat. 2/25**
8	***3/2-Test 3***	**Notes, Videos & HW: 1.2, 10.1** Test 3 Review due in ALEKS: **Wed. 3/1** Post-Test 3 K.C. Due in ALEKS: **Fri. 3/3** Week 8 Topics Due in ALEKS: **Sat. 3/4**
9	3/9-Ch. 10 Problem-solving Day *(Applications of Parabolas & Ellipses)*	**Notes, Videos & HW: 10.3** Week 9 Topics Due in ALEKS: **Sat. 3/11**
	3/16-No Class!	***SPRING BREAK***
10	3/23- Test 4 Review Activity *(Review problems posted in Canvas)*	**Notes, Videos & HW: 10.2, Review** Quiz 4 due in ALEKS: **Wed. 3/22** Week 10 Topics Due in ALEKS: **Sat. 3/25**

11	**3/30-*Test 4***	**Notes, Videos & HW: 11.1, 11.2** Test 4 Review due in ALEKS: **Wed. 3/29** Post-Test 4 K.C. Due in ALEKS: **Fri. 3/31** Week 11 Topics Due in ALEKS: **Sat. 4/1**
12	*4/6*- Test 5 Review Activity *(Review problems posted in Canvas)*	**Notes, Videos & HW: 11.3, 11.4, 11.5, Review** Quiz 5 due in ALEKS: **Wed. 4/5** Week 12 Topics Due in ALEKS: **Sat. 4/8**
13	**4/13- *Test 5* +** *(11.4 Induction Problems Due)*	**Notes, Videos & HW: Review** Test 5 Review due in ALEKS: **Wed. 4/12** Post-Test 5 K.C. Due in ALEKS: **Fri. 4/14**
14	*4/20*-Final Exam Review Activity *(Bring Old Tests to Review)*	**Notes, Videos & HW: Review**
15	**4/27-No Regular Class** **(FINALS WEEK)**	Overall Mastery Pie due in ALEKS **BEFORE** **Final Exam:** **Thursday 4/27, 10am-12:30pm**

Disclaimer: Changes to the syllabus may be made at the discretion of the instructor.
(*Key: HW = Homework*)