Course Syllabus

MTH 112, Pre-Calculus Algebra
(Lecture-Based)

1. INSTRUCTOR INFORMATION

Name: **Adrian Seaver**

Office: **No On-Site Office (call / email for appointment in Math Lab or alternate location)**

Phone number: **(256) 829-8657**

E-mail address: **adrian.seaver@calhoun.edu** (*students that text or email me their name, class (4:00 MTH112), major, favorite movie and food before next week gets +2 on 1st Test*)

Office hours: **Available before/after class or by appointment during the week (call / email)**

Website: **https://blackboard.calhoun.edu** (or alternatively **http://www.adrianseaver.com**)

Remind: Go to **remind.com/join/fa18mth112** or text @fa18mth112 to the number 81010

2. COURSE DETAIL

a. Course Name, Number, and Hours: **MTH 112 Pre-Calculus Algebra - 3 Semester Credit Hours**

b. Section and Reference / Synonym: **Section 402, CRN # 1578**

c. Class meeting time: **Tues / Thurs @ 4:00pm – 5:15pm, Room 1322**

d. Textbook: **Precalculus, 6th edition, by Robert Blitzer**
   Pearson, 2018 (Chapters 1, 2, 3, 7, 10: See topic outline for sections covered)

e. Course Objectives: The objective of this course is to provide an understanding of concepts, develop competent skills, and demonstrate applications in the following areas:

   i. Analytic and geometric interpretation of algebraic, exponential, and logarithmic functions,
   ii. Analytic and geometric interpretation of systems of equations and inequalities.

   While building on the manipulative skills from algebra, this course strives to develop analytic skills as a preparation for further mathematical applications or courses in mathematics requiring knowledge of algebraic and transcendental functions.

3. COURSE SUPPORT MATERIALS

a. **MyMathLab** is the software used for this course. Homework assignments and other instructional tools are available via this web-based structure (videos, HW helps, etc.)

b. **** Recorded lectures** provided by Mr. Rodney Alford as an additional learning resource can be accessed through Blackboard at **http://webct6.calhoun.edu**

c. Library and LRC resources and services are accessible on-line at **http://lib.calhoun.edu/lib**

d. Online resources (especially if missing class) at **http://www.khanacademy.org**

4. INSTRUCTIONAL METHODS

Instructional methods may include, but not be limited to lectures (with handouts), class discussions, and computer-generated material. The facilities of the Mathematics Learning Center may be utilized.

MyMathLab is the software used for this course**.** Students must complete the homework using this web-based software. Chapter exams, sample exams, and/or quizzes will likely be paper-based.

5. WITHDRAWAL POLICY

If a student has excessive absences or is likely to earn a grade of F, he/she is encouraged to withdraw from the course after consulting with the instructor. **Failure to officially withdraw from the course could result in a grade of F and adversely impact financial aid.** Withdrawing from a course is the responsibility of the student; therefore, a grade of F will not be changed to a grade of W. A student may withdraw through the final drop day which is Wednesday, *__November 14__* for this semester.

Tentative Schedule / Dates

	CHAPTER 1 FUNCTIONS AND GRAPHS	
8/21	1.1	Graphs and Graphing Utilities
8/23	1.2	Basic Functions and Their Graphs
8/28	1.3	More on Functions and Their Graphs
8/30	1.4	Linear Functions and Slope
9/4	1.5	More on Slope
9/6	**TEST**	
9/11	1.6	Transformations of Functions
9/13	1.7	Combinations of Functions; Composite Functions
9/18	1.8	Inverse Functions
9/20	1.9	Distance and Midpoint Formulas; Circles
	CHAPTER 2 POLYNOMIAL AND RATIONAL FUNCTIONS	
9/25	2.1	Complex Numbers
9/27	2.2	Quadratic Functions
10/2	**TEST**	
10/4	2.3	Polynomial Functions and Their Graphs
10/9	2.4	Dividing Polynomials; Remainder and Factor Theorem
10/11	2.5	Zeros of Polynomial Functions
10/16	2.6	Rational Functions and Their Graphs
10/18	2.7	Polynomial and Rational Inequalities
10/23	2.8	Modeling Using Variation
10/25	**TEST**	
	CHAPTER 3 EXPONENTIAL AND LOGARITHMIC FUNCTIONS	
10/30	3.1	Exponential Functions
10/30	3.2	Logarithmic Functions
11/1	3.3	Properties of Logarithms
11/6	3.4	Exponential and Logarithmic Equations
11/8	3.5 Exponential Growth and Decay; Modeling Data	
11/13	**TEST**	
	CHAPTER 7 SYSTEMS OF EQUATIONS AND INEQUALITIES	
11/15	7.1	Systems of Linear Equations in Two Variables
11/27	7.2	Systems of Linear Equations in Three Variables
11/29	7.3	Partial Fractions
12/4	7.4	Systems of Nonlinear Equations in Two Variables
12/4	7.5	Systems of Inequalities
	CHAPTER 8 MATRICES AND DETERMINANTS *	
	CHAPTER 10 SEQUENCES, INDUCTION, AND PROBABILITY	
11/29	**10.5 The Binomial Theorem**	
12/11	**FINAL EXAM**	
	* = If time permits…	

6. ONLINE HOMEWORK POLICIES

Online homework is a ***required*** portion of this course and ***MUST*** be completed for each chapter. All sections of online homework for a given chapter ***MUST be completed prior to (or on the date of) the test for that chapter*** with a grade of 70% or better (on EACH section). For example, if your test on chapter 1 is on September 8, then when I download HW grades the morning after the test, you will need to have a grade of 70% or better on ***each individual section*** from chapter 1 (sections 1.1 – 1.5) to avoid penalty. Keep in mind that even if you are absent on the day of the test, you still MUST have the homework completed by the date of the test to avoid penalty (– 3 points on your test grade).

Also, as a bonus, those who complete ***each individual section*** of a given chapter's online HW with a 100% grade will be given + 5 points to their grade for that test (good bonus – half a letter grade).

7. GRADING PLAN

Chapter Tests – 35%
Online Homework – 15%
Quizzes – 32%
Final Exam – 18%

8. GRADE SCALE

A – Excellent   (90% – 100%)
B – Good   (80% –   89%)
C – Average   (70% –   79%)
D – Poor   (60% –   69%)
F – Failure   (Below 60%)

9.   **OTHER ASSIGNMENT INFO**

The final exam for this course will cover all material (comprehensive) with a bigger portion of the exam concentrated on the material in the last chapter. Along with online homework assignments, I will also try to provide a list of problems from the textbook that correspond to the type of problems that you will encounter while doing online homework exercises. These book problems are for **additional practice** and lecture purposes only. They will **not be taken up for a grade**.

<u>Tentative</u> Test Dates:
> Test 1 – Sections 1.1-1.5: Thursday, September 6
> Test 2 – Sections 1.6-2.2: Tuesday, October 2
> Test 3 – Sections 2.3-2.8: Thursday, October 25
> Test 4 – Sections 3.1-3.4: Tuesday, November 13
> Final Exam (Not As Tentative): Tuesday, December 11

Holidays for the semester. The school will be closed and class cancelled on the following dates:
> Thanksgiving Break – November 21 – 23 (Thursday Nov. 22 for this class)

10.   **DATE, TIME, AND LOCATION OF FINAL EXAM**

Tuesday, December 11 @ 4:00 pm – 6:00 pm (same classroom)

11.   **ATTENDANCE POLICY**

<u>The maximum number of absences for this course is 7 or 4-consecutive</u>

Attendance is taken for each class meeting. Absences are counted beginning with the first class meeting after the student registers; however, students are responsible for all coursework and assignments made or due from the first day of class. In general, students should have no more than <u>seven</u> absences for a 15-week term. Furthermore, any student missing 5 or more classes in a row **will not pass the course**. Communication with the instructor concerning absences is essential. If a student has excessive absences, he/she is encouraged to withdraw from the course after consulting with the instructor. *Failure to officially withdraw from the course could result in a grade of F and adversely impact financial aid.* Withdrawing from a course is the responsibility of the student; therefore, a grade of F will not be changed to a grade of W.

Military personnel who are involuntarily called to active duty for unscheduled and/or emergency situations and those individuals called for jury duty will be excused with official documentation. College-related events which the student is required to attend by the club sponsor and which have been approved by the appropriate Dean, will also be excused. Official documentation will be required.

If a student registers during the drop/add period, attendance is counted from the first class meeting following registration. *I will also award minor extra credit for attendance* (likely credit will be + 3 pts. on final grade for students that missed 0 times, + 2 pts. for those missing 1 time, +1 for those missing twice => includes unexcused or excused absences).

Please contact me before class if you expect to miss class (unless a last-minute or emergency situation arises). Students are responsible for activities missed during any absence, whether excused or unexcused, and make-up work will be governed by the instructor as stated below. It is the *<u>student's responsibility</u>* to keep a record of his/her absences and to understand specific policies detailed in each course syllabus.

12.   **MAKEUP POLICY/HOW TO MAKE UP MISSED WORK**

Please contact me as soon as possible before missing class (or as soon as possible after class) in order to make up missed work / tests. If you miss a **test** (also counted as an absence), you must complete the test **within 1 week** (don't forget that online HW is still due on the day the test is given in class to avoid penalty). Make-up tests will be administered in the testing center (Huntsville), and you will need to bring your student ID. The testing center hours are typically Mon-Thurs 8 am - 7 pm and Fridays from 8 am -11 am.

Quizzes (which will be shorter and of which the lowest grade will be dropped) will only be made up on class days (before or after class) and follow similar guidelines.

16. **COMMUNICATION**

Calhoun Community College will communicate campus-wide information via SPACE student e-mail. This is the official method that you will receive information related to your enrollment at Calhoun. You have a SPACE e-mail account, which you can access from www.calhoun.edu. Your username is your "C" number. Your initial password is cal and the last 5 digits of your "C" number. You will be prompted to change the password. Your email address will be your first initial + last name + last 5 digits of your "C" number@calhoun.edu (Example: jsmith23456@calhoun.edu)

18. **GENERAL COMMENTS BY INSTRUCTOR**

1. Mobile phones (and laptop / tablet) should be turned to "silent" or "vibrate" during class and put away.

2. The Mathematics Lab is located on the Main Floor of the Math, Science, and CIS Building in Room 1106. The purpose of the Mathematics Lab is to provide free tutoring and to assist mathematics students with class, lab, and homework assignments. The staffed hours of the Lab may vary from semester to semester but are supposed to be from 9-9 Mon-Thurs.

3. Food / Drinks are allowed in class in which case they do not create a problem for others or disrupt the class. This policy may be revised if necessary.

4. Please try not to be late for class. If I can make it on time, I expect you can as well. I know it may be hard for some of us to get here after work, but the earlier we get started, the earlier we get out. *If tardiness becomes a problem, I will be forced to mark students absent for repeat offenses.*

5. Please try not to leave class early unless absolutely necessary. I hope to avoid the distraction of students leaving during normal class time. If a situation arises in which you have to leave early, please inform me before class and try to sit close to the door so as to minimize distraction. *If leaving early becomes a problem, I will be forced to mark students absent for repeat offenses.*

6. Expect regular quizzes. I will drop your lowest quiz grade (not test grade), but you can reasonably expect a quiz every week (if a chapter test is not given that week). Quizzes are typically short and will only take a small portion of class time.

7. Private tutoring is available via the Calhoun's STAR Institute (students can stop by or schedule an appointment 256-713-4882)

THIS SYLLABUS IS EFFECTIVE FALL SEMESTER, 2018