****

**SYLLABUS**

**MAC 1105 – 56465**

**College Algebra**

**3 credit hours  
FALL 2021**

**Instructor:** Professor Alex Ambrioso

**Office Location:** BTEC 117

**Phone:** (813) 253-7917 (work)

(813) 841-7072 (cell)

**Email address:**  [aambrioso@hccfl.edu](mailto:aambrioso@hccfl.edu)

**Office hours:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **TIME** | **MONDAY** | **TUESDAY** | **WEDNESDAY** | **THURSDAY** |
| **9:30 am – 11:00 am** | **X** | **X** | **X** | **X** |
| **1:00 pm – 3:30 pm** |  | **X** |  | **X** |

An **X** indicates that I will be available in my office at that time. Additional hours are available by appointment including Fridays. You can also meet me virtually by appointment on Microsoft Teams.

Please email me to schedule a time to meet me in my office or virtually if the listed times are not convenient for you.

**Class Meeting Days and Times:** Monday/Wednesday: 2:30 pm – 3:45 pm

**Class Meeting Location:** BTEC 117

**Office Location:** BTEC 108

**Effective Dates:** 8/16/21 – 12/7/21

**COURSE DESCRIPTION:**

Provides students with the opportunity to gain algebraic knowledge needed for many fields such as engineering, business, science, computer technology, and mathematics. Graphical and numerical methods support the study of functions and their corresponding equations and inequalities. Students will study linear, quadratic, polynomial, rational, exponential, logarithmic, inverse, composite, radical, and absolute value functions; systems of equations and inequalities; modeling applied problems; and curve fitting techniques. Previous credit in any MAC class precludes credit in MAC 1105.

**PREREQUISITES:**

MAT 1033 with a grade of at least “C” or a required score on the HCC Placement test.

**ADDITIONAL MATERIALS NEEDED:**

Calculator – You will be allowed to use a scientific calculator on the proctored tests. The HCC Math department ONLY allows students to use the following calculators: TI-30Xa, TI 30XIIS, Casio FX-260, or Casio FX-300 MS Plus.

**OBJECTIVES:**

1. **FUNCTIONS AND GRAPHS**
2. Find the distance between two points. **(2.1)**
3. Define and identify relations and functions. **(3.1)**
4. Find the domain and range of relations and functions. **(3.1, 3.2)**
5. Use functional notation. **(3.1)**
6. Evaluate and simplify the difference quotient of a function. **(3.1)**
7. Identify linear functions and solve applied problems with linear functions. **(4.1, 4.2)**
8. Perform operations with functions, including composition. **(3.4)**
9. Understand characteristics and properties of the graphs of functions, including symmetry, extrema, and intervals of increasing, decreasing, constant. **(3.2, 3.3)**
10. Graph basic functions: **(3.2, 3.6)**
11. Apply graphical transformations to functions. **(3.5)**
12. Graph piecewise defined functions. **(3.2)**
13. Find the inverse of a function algebraically and graphically. **(3.7, 5.7)**
14. **POLYNOMIAL FUNCTIONS**
15. Graph quadratic functions and solve optimization problems involving quadratic functions. **(5.1)**
16. Use characteristics of polynomial functions to graph, including end behavior and multiplicity of zeros. **(5.2, 5.3)**
17. Solve polynomial inequalities. **(5.8)**
18. **RATIONAL FUNCTIONS**
19. Graph rational functions including intercepts, vertical and horizontal asymptotes, and end behavior. (**3.5)**
20. Solve rational inequalities. **(5.8)**
21. Solve application problems involving rational functions. **(5.6)**
22. **EXPONENTIAL AND LOGARITHMIC FUNCTIONS**
    1. Convert between exponential and logarithmic form. **(6.3)**
    2. Evaluate logarithmic and exponential expressions. **(6.1, 6.3)**
    3. Use and apply the properties of logarithms, including change of base. **(6.3, 6.5)**
    4. Graph exponential and logarithmic functions. **(6.2, 6.4)**
    5. Solve exponential and logarithmic equations. **(6.6)**
    6. Solve applications of exponential growth and decay. **(6.7)**
23. **SYSTEMS OF EQUATIONS AND INEQUALITIES**
    1. Solve systems of linear equations in 3 variables by elimination/substitution. **(7.2)**
    2. Solve systems of non-linear equations in 2 variables. **(7.3)**
    3. Solve systems of non-linear inequalities graphically. **(7.3)**
    4. Solve application problems using systems of equations. **(7.1, 7.2)**

**COURSE COMPONENTS AND GRADING SYSTEM**

**ONLINE HOMEWORK:**

Online homework will consist of problem sets for each section of content for the course. The problems come from a free online homework system called MyOpenMath. The system will automatically grade the work. The problems can be accessed through Canvas by going to the schedule at the bottom of the Canvas home page for the course. You will not be using the MyOpenMath website since Canvas will connect you directly. The system also contains a free textbook and other resources to help you learn the content. All online homework will have a due date. For full credit the homework must be completed by the due date. Late homework will receive a 20% deduction. The average of all your online homework will be 20% of your course grade. Doing the online homework on time will help prepare you for the tests. You should open up a time in your schedule to work on the online homework.

**ASSIGNMENTS:**

Various assignments will be assigned over the term. These will involve problems or activities for you to work on. You will upload your work to Canvas. If the assignment involves working out problems, you will work these problems out on paper and upload them to Canvas as a pdf on a single file. **The first assignment, the Mandatory Attendance Assignment, must be completed by the due date set in Canvas or you will be removed from the class. This is an HCC policy over which I have no control. The due date will be the second week of class. Please check to schedule in Canvas to see the exact date.** At the end of the term the average of all the assignments will count as 10% of your grade.

**TEST REVIEWS:**

Before each test there will be a test review due. These will be post in Canvas. You must work out each problem on separate paper. You must carefully show all of your work. When you complete the test review, you will upload it to Canvas. The document must be a single pdf file. I recommend you use Microsoft Office Lens to upload these assignments. This app will allow you to photograph you work and convert it to a single pdf file. Late test reviews will receive a 30% deduction.

**PROCTORED TESTS:**

Four proctored tests will be administered as shown on the schedule. There will be four reviews available that will help students prepare for the tests. They should be completed on your own paper then upload to Canvas as a single pdf file. The average of the four tests will be 50% of the course grade. If you miss a test, the final exam will replace it. If you missed more than one test you will receive a zero for any other missed tests.

**PROCTORED FINAL EXAM:**

The final exam is optional if you have a passing grade in the course before the final exam. If you do not take the final, then the average of your four tests will also count as your final exam grade. If you are not passing the course before the final exam, then the final exam grade will replace your lowest test grade AND count as your final exam grade. If you are passing but wish to improve your grade, then you can take the final exam to replace your lowest test grade. For all students the final exam grade will count as 10% of your course grade.

Here is a summary of the components of the grade for this course and the grading scale:

|  |  |  |
| --- | --- | --- |
|  | **COURSE GRADE SUMMARY** |  |
|  | **EVENT** | **PERCENTAGE** |
| 1. | Online Homework | 20 % |
| 2. | Test Reviews | 10 % |
| 3. | Assignments | 10 % |
| 4. | Proctored Tests | 50 % |
| 5. | Proctored Final Exam | 10 % |

|  |  |
| --- | --- |
| **GRADING SCALE** | |
| 90 – 100 % | A |
| 80 – 90 % | B |
| 70 – 79 % | C |
| 60 – 69 % | D |
| 0 – 59 % | F |

**Final grades may be viewed in Canvas, WebAdvisor, or** [**www.floridashines.org**](http://www.floridashines.org) **at the end of the term.**

**EXPECTATIONS FOR STUDENTS AND THE INSTRUCTOR:**

Every student will

1. Treat the teacher with respect.
2. Work diligently to complete all assignments on time and prepare for the quizzes and tests.
3. Take the tests on the days they are scheduled.
4. Not use any resources other than an allowed calculator (see list above) during the proctored exams.

The instructor will

1. Treat students with respect.
2. Present the course content in an interesting and effective way.
3. Work diligently to help the students succeed in this course.
4. Listen to the opinions and concerns of the students.
5. Keep all office hours and appointments.

**RELIGIOUS OBSERVANCES**:

HCC will reasonably accommodate the religious observances, practices, and beliefs of students in its admissions, examination policies, and work assignments. You must notify me in writing one week prior to a religious observance.

**WITHDRAWAL:**

The lastdayfor the students to withdraw from the course is **Saturday, October 23rd.**

Additional information regarding the withdrawal policy can be found in the HCC Catalog.

**INCOMPLETE:**

Before an incomplete grade is given, all of the following requirements must be satisfied:

1. You must have completed more than two-third of the course.

1. You must have at least a “C” average.
2. You must provide written documentation justifying the request.

INCOMPLETE GRADES MUST BE APPROVED BY THE INSTRUCTOR AND CONFIRMED BY THE ACADEMIC DEAN. More information regarding the incomplete policy can be found in the HCC Catalog.

**ACADEMIC SUCCESS CENTER (STEM CENTER):**

The STEM Center provides ***free*** math support and resources designed to help students be successful, including:

* drop-in tutoring, tutor-assisted group study sessions, and workshops
* textbooks, calculators, and solution manuals available for use in the ASC.

The STEM Center is located in BLRC 200.  It is open Monday – Friday.

The phone number is 813-259-6598. The Math Lab will be open to all students on a walk-in basis, but each student will need to sign in every time they enter the lab.  For more information, please see: <https://www.hccfl.edu/support-services/academic-success-centers> or click on the link in MyHCC/Canvas. Information for virtual services can be found here: <https://hccfl.mywconline.net/>.

**POLICY FOR HANDLING ACADEMIC DISHONESTY:**

Cheating is a serious offense. The cheating policy is described in the HCC Student Handbook. Anyone caught cheating on any work that contributes to the grade in this course will be given an automatic and permanent zero for that work. If cheating occurs on any course work you will be receive a zero for that work.

**REQUEST FOR ACADEMIC ADJUSTMENT:**

Any student whose disability falls within the American Disabilities Act (ADA) and requires an academic adjustment should contact the office of services for students with disabilities. The Brandon office is located in the Student Service Building room 109. You may also reach the office by phone at (813) 253-7914. Although the Office of Services to Students with Disabilities notifies instructors of any authorized student academic adjustments, students receiving such academic adjustments are required to contact their instructor directly to make appropriate arrangements for receiving the authorized academic adjustments. The student is responsible for contacting the instructor once the student is approved for an academic adjustment.

**TEST CENTER INFORMATION:**

At the instructor’s discretion a student may need to use the Test Center to take a test. A student who has permission to take a test in the Test Center must email the test center to make an appointment to take a test AT LEAST 24 HOURS. The Brandon Test Center email address is: [brtesting@hccfl.edu](mailto:brtesting@hccfl.edu). Within the message of the email, you must provide the following information:

1. Your name

2. Instructor’s name (Ambrioso)

3. Course Name

4. Designate what test you are taking.

5. Date and time you wish to take the test

**You will receive an Automatic reply: Appointment - APPROVAL confirmation. The Brandon Test Center is located in BSSB 203.**

**EMAIL:**

One of the personal tools provided to students is an official HCC student email address. You should use this email as the primary means of communicating with me.

**RECORDING OF CLASS SESSIONS:**

Students may, without prior notice, record video or audio of a class lecture, for a class in which the student is enrolled, for their own personal educational use.  A class lecture is defined as a formal or methodical oral presentation as part of an HCC course intended to present information or teach enrolled students about a particular subject. Recording class activities other than class lectures is prohibited. Examples of activities for which recording is prohibited include, but are not limited to, the following: lab sessions, student presentations (whether individually or part of a group), class discussion (except when incidental to and incorporated within a class lecture), clinical presentations such as patient history, academic exercises involving student participation, test or examination administrations, field trips, private conversations between students in the class or between a student and the faculty member, and invited guest speakers.  Recordings may not be used as a substitute for class participation and class attendance and may not be published or shared without the written consent of the faculty member.  Failure to adhere to these requirements may constitute a violation of the HCC Student Code of Conduct.

**STUDENT ASSISTANCE PROGRAM**:

HCC’s Student Assistance Program offers resources tailored to student life, providing you with the right tools to help you through some of life's toughest challenges. The college has contracted BayCare Health Management to provide free, professional, confidential counseling by telephone and in person. A wide range of topics may be addressed through this program, including mental health counseling, budgeting, and financial concerns. Please call 800-878-5470 or email [baycaresap@baycare.org](mailto:baycaresap@baycare.org) further information.

**EQUITY/EQUAL ACCESS POLICY:**

Hillsborough Community College is an equal access/equal opportunity employer that makes employment and education-related decisions without regard to race, color, gender, religion, national origin, age, disability, sexual orientation (including gender identity), marital status, ethnicity, pregnancy, genetic information, veteran status, or any other bias that is or may be prohibited by law. In addition, the college does not discriminate in employment practices or in the admission and treatment of students. HCC is committed to equitable treatment for all students and employees and to a learning and working environment free of discrimination and harassment for current as well as future students and employees. The college provides equal educational opportunities for qualified individuals with disabilities and complies with, as well as supports the Americans with Disabilities Act. HCC’s Equity Office ensures compliance with federal and state laws prohibiting discrimination and sexual harassment and compliance with Title IX. Employees and students who believe they have been a victim of discrimination harassment, including sexual harassment and bullying, should contact:

**Elina Bivins, MBA**Equity Manager & Title IX CoordinatorDistrict Administrative Offices   
39 Columbia Drive, Room 717  
Tampa, FL 33606   
Telephone: 813-253-7037  
Email: [ebivins2@hccfl.edu](mailto:ebivins2@hccfl.edu)

**SAFETY AND SECURITY:**

If you notice any situations while on campus that represent potential or real safety or security problems, you should notify the local campus Public Safety Office: **• 253-7911 •**

MAC 1105 – MW @ 2:30 pm

Tentative Schedule – FALL 2021

|  |  |  |
| --- | --- | --- |
| **Class** | **Date** | **Section or Event** |
| **1** | **M 8/16** | Orientation, 2.1, **Quiz 1** |
| **2** | **W 8/18** | 2.2 |
| **3** | **M 8/23** | **Quiz 2**, 3.1 |
| **4** | **W 8/25** | 3.2 |
| **5** | **M 8/30** | **Quiz 3**, 3.3 |
| **6** | **W 9/1** | 3.4 |
| **No Class** | **M 9/6** | **Labor Day** |
| **7** | **W 9/8** | **Review** |
| **8** | **M 9/13** | **Test 1** |
| **9** | **W 9/15** | 3.5 |
| **10** | **M 9/20** | 3.6, 3.7 |
| **11** | **W 9/22** | 4.1, 4.2 |
| **12** | **M 9/27** | **Quiz 4**, 5.1 |
| **13** | **W 9/29** | 5.2 |
| **14** | **M 10/4** | **Quiz 5**, 5.3 |
| **15** | **W 10/6** | **Review** |
| **16** | **M 10/11** | **Test 2** |
| **17** | **W 10/13** | 5.6 |
| **18** | **M 10/18** | **Quiz 6**, 5.7 |
| **19** | **W 10/20** | 5.8, 6.1 |
| **No Class** | **M 10/25** | **Faculty Inservice** |
| **20** | **W 10/27** | 6.2, 6.3 |
| **21** | **M 11/1** | **Quiz 7**, 6.4 |
| **22** | **W 11/3** | **Review** |
| **23** | **M 11/8** | **Test 3** |
| **24** | **W 11/10** | 6.5 |
| **25** | **M 11/15** | 6.6, 6.7 |
| **26** | **W 11/17** | 7.1 |
| **27** | **M 11/22** | **Quiz 8**, 7.2, 7.3 |
| **28** | **W 11/24** | **Review** |
| **29** | **M 11/29** | **Test 4** |
| **30** | **W 12/1** | **Final Exam @ 12:30 – 2:20 pm** |
| **No Class** | **W 12/6** | **Other Exams – No Class** |

## \*\* LAST DAY TO DROP/ADD: Friday, August 20th \*\*

## \*\* LAST DAY TO WITHDRAW: Saturday, OCtober 23rd \*\*