	DEPARTMENT OF MATHEMATICS **SOUTHWEST COLLEGE** **COURSE SYLLABUS – Fall 2018 – F8A** **MATH 0310: Basic Concepts for Business Math** **and Statistics**

CRN 19941 / Mo and We 8:00 – 10:50 AM / West Loop Center, Room 171

INSTRUCTOR:	Houssam Kalajo
CONTACT INFORMATION:	Houssam.kalajo@hccs.edu web page http://learning.hccs.edu/faculty/houssam.kalajo
MYMATHLAB COURSE ID:	**Kalajo19939** **All homework assignmentsDue on or before 10/18/2018**

Office location and hours: West Loop Campus, Student Success Center F15, 7 – 8 am, Mo – Th; by appointment.

Course Description
Basic Concepts for Business Math and Statistics: Topics include real numbers, order of operations, proportions and percent, percent of increase/decrease, simple interest, introduction to probability and statistics, integer exponents, polynomials, linear equations and inequalities in one variable, linear equations and inequalities in two variables, systems of linear equations, matrices, linear functions and an introduction to other which may include exponential, quadratic functions, quadratic equations, and set operations. A departmental final examination must be passed with a score of 60% or more in order to pass the course.

Prerequisites
TSIA ABE level 5 or 6; TSIA Math Score 336 – 349 with Intermediate Algebra Diagnostic Score 0 – 3; Math 0106: Pass with "C" or better

Course Goal
This course is intended for students who have either never been exposed to algebra or who have been away from the subject for quite some time. In particular, this course is intended to prepare students for the study of Math 1324 or Math 1342. Be sure that you are enrolled in the correct math class. If you are a STEM Major or have a Liberal Arts major, it is likely that you need MATH 0309 instead of MATH 0310. Notify your teacher and/or advisor as soon as possible.

HCC MATH PATHWAYS
Math 0309 is a co-requisite to MATH 1332. MATH 0310 is a co-requisite to with MATH 1324 and MATH 1342. MATH 0309 is a prerequisite to MATH 0314 and MATH 0314 is a prerequisite to MATH 1314.
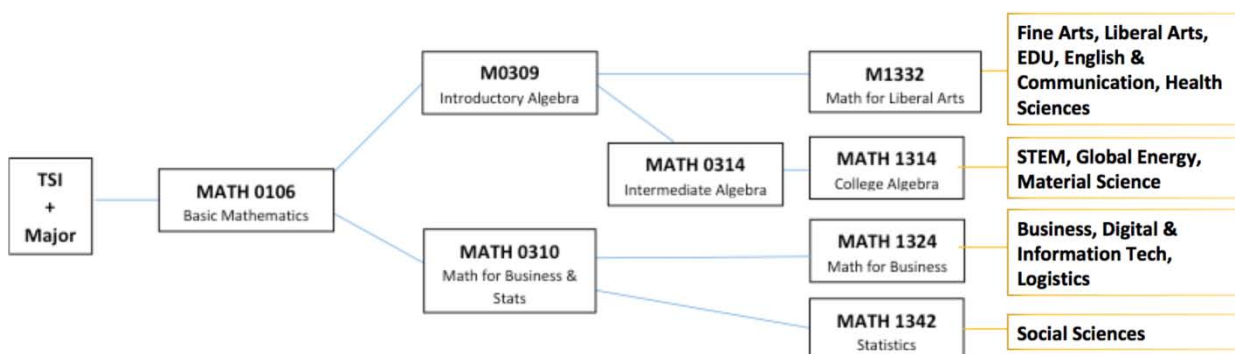
Course Student Learning Outcomes (SLO)
1. Identify and apply properties of real numbers and perform accurate arithmetic operations with numbers in various formats.

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2. Demonstrate the ability to manipulate/simplify algebraic expressions, & classify/solve algebraic equations with appropriate techniques.
3. Demonstrate the use of elementary graphing techniques and perform matrix operations.
4. Find the probability of a simple event, and understand the counting techniques.
5. Recognize, read, interpret statistical graphs and find the central of tendency of data.
6. Solve problems including ratios, rates, proportion, and percent.
7. Recognize, interpret, and solve the linear, quadratic, exponential models of equations.

Learning objectives
Students will:
1. add, subtract, multiply and divide real numbers and manipulate certain expressions
2. use the rules for integer exponents
3. simplify algebraic expressions
4. solve problems using equations and inequalities
5. plot ordered pairs and graph linear equations
6. solve systems of linear equations
7. operations on matrices and determinant
8. graph linear inequalities
9. find the rate of change of a line & write its equation
10. use rules for exponents and operations on polynomials
11. use function notation and evaluate functions
12. model situations with linear, quadratic, or exponential functions
13. find the probability of a simple event, find the central of tendency of data
14. read and interpret bar graphs, circle graphs, line graphs, pictorial graphs

Core Objectives
Given the rapid evolution of necessary knowledge and skills and the need to take into account global, national, state, and local cultures, the core curriculum must ensure that students will develop the essential knowledge and skills they need to be successful in college, in a career, in their communities, and in life. Through the Texas Core Curriculum, students will gain a foundation of knowledge of human cultures and the physical and natural world, develop principles of personal and social responsibility for living in a diverse world, and advance intellectual and practical skills that are essential for all learning.

Critical Thinking Skills: to include creative thinking, innovation, inquiry, and analysis, evaluation and synthesis of information.

Communication Skills: to include effective development, interpretation and expression of ideas through written, oral and visual communication.

Empirical and Quantitative Skills: to include the manipulation and analysis of numerical data or observable facts resulting in informed conclusions.

Instructional Materials

Textbook: Introductory and Intermediate Algebra for Houston Community College;
Margaret Lial
Pearson Custom Publishing: 2019
ISBN 13: 978-0-13-533201-6

Students will either need to purchase their textbook/access code bundle from the bookstore, OR they can purchase it online via the MyMathLab registration process.However, MyMathLab comes with an embedded electronic book; therefore, you may not need to purchase a physical textbook.

Course Outline

INTRO. TO REAL NUMBERS & ALGEBRAIC EXPRESSIONS (Review Mode) (Chapter 1)   (3 hours)
This unit presents an introduction to algebra and the real number system. The instructor should emphasize addition, subtraction, multiplication and division of real numbers and the properties of real numbers. This unit concludes with simplifying expressions and the order of operations. Listed below are the subtopics covered in this unit:

      1.1 Introduction to Algebra
      1.2 The Real Numbers and the Number Line
      1.3 Addition and Subtraction of Real Numbers
      1.4 Multiplication and Division of Real Numbers
      1.5 Properties of Real Numbers
      1.6 Simplifying Expressions; Order of Operations

PROBABILITY AND STATISTICS (Chapter 2)   (8 hours)
This unit includes sets and simple operations on sets, counting techniques, circle graphs, pictographs, bar graphs, line graphs, mean, mode, median, and probability. Listed below are the subtopics covered in this unit:

      2.1 Sets and Set operations
      2.2 The counting techniques
      2.3 Introduction to Probability
      2.4 Organizing data
      2.5 Circle Graphs and Pictographs
      2.6 Bar Graphs and Broken-Line Graphs
      2.7 Statistical Measures (Mean, Mode, Median)

LINEAR EQUATIONS AND INEQUALITIES IN ONE VARIABLE (Chapter 3)   (4 hours)
The major emphasis of this chapter is to teach solving linear equations and inequalities. A mastery of this chapter requires that the student have a thorough understanding of combining like terms and properties of equality and inequality. The skills necessary for solving equations is extended to include working with the equality of two fractions and solving inequalities in a single variable. Listed below are the subtopics covered in this unit:

      3.1 Solve Linear Equations by Addition Principle, Multiplication Principles, and Both
      3.2 Translating Sentences into equations
      3.3 Applications of Linear Equations
      3.4 Linear Inequalities
      3.5 Compound and Absolute Value Inequalities

INTRODUCTION TO EQUATIONS AND PERCENT (Chapter 4)   (4 hours)
This unit presents an introduction to equation and percent applications. The instructor should emphasize on solutions of equations, solving percent equations and applications, solving proportions, percent of increase and decrease, markup and discount, and simple interest.

      4.1 Proportions
      4.2 Percent and basic percent equations
      4.3 Percent of increase and percent of decrease
      4.4 Markup, Discount, Sales
      4.5 Simple Interest

GRAPHS OF LINEAR EQUATIONS AND INEQUALITIES (Chapter 5)   (5 hours)
This unit introduces plotting ordered pairs in the rectangular coordinate system, rates of change (slopes), and sketching linear equations, parallel and perpendicular lines, and linear inequalities. Listed below are the subtopics covered in this unit:

      5.1 The Rectangular Coordinate System
      5.2 Graphs of Linear Equations
      5.3 The slope of a Line and x- and y-intercepts

5.4 Finding Equations of Lines
5.5 Inequalities in Two Variables

SYSTEMS OF LINEAR EQUATIONS IN TWO VARIABLS (Chapter 6)   **(4 hours)**
This unit covers systems of linear equations in two variables and matrices. Instructor should emphasize in teaching how to solve systems of equations by graphing, substitution, and addition methods and use the systems to solve simple applications. Listed below are the subtopics covered in this unit:

6.1 Solving Systems of Linear Equations by Graphing
6.2 Solving Systems of Linear Equations by Substitution Method
6.3 Solving Systems of Linear Equations by Addition Method
6.4 Introduction to Matrices and Simple Matrix operations

POLYNOMIALS (Chapter 7)   **(3 hours)**
This unit begins with polynomials and operations on polynomials. The topics include rules for exponents, definition of polynomials, adding and subtracting polynomials, and multiplying and dividing polynomials. Instructor should emphasize the rules for exponents. Listed below are the subtopics covered in this unit:

a. Introduction to polynomials and integer exponents
b. Addition and Subtraction of polynomials
c. Multiplication of polynomials and Division of Monomials

INTRODUCTION TO FUNCTIONS ANDMODELS (Chapter 8)   **(4 hours)**
Topic include: linear functions, quadratic functions, exponential functions and applications. The major emphasis of this unit is to teach students to evaluate function values and use functions to model applications. Listed below is the subtopic covered in this unit:

8.1 Functions (definitions of relations and functions, function notation, and evaluating functions)
8.2 Linear functions and models
8.3 Basic Quadratic functions and models
8.4 Basic Exponential functions and models

Instructional Methods
As an instructor, I want my students to be successful. I feel that it is my responsibility to provide you with knowledge concerning mathematical concepts contained in our developmental math curriculum.   This knowledge will prepare you for College Algebra and will allow you to meet the math requirements that are needed for your career of choice. As a student wanting to master the mathematical concepts contained in the developmental math curriculum, it is your responsibility to read the textbook, submit assignments on the due dates, study for the exams, participate in classroom activities, attend class, and enjoy the learning experience.In this course, you will be involved in discussions with your classmates and your instructor. As you will want to contribute to these discussions, you will need to come to class prepared to discuss, analyze, and evaluate information from your text and notes.

Student Assignments
Assignments have been developed that will enhance your learning. To better understand a topic, you will be given assignments on key information that you will need to remember for your success in your career. Students will be required to successfully complete the following:

Mathematics Homework Assignments
All homework assignments for this class must be completed online using MYMATHLAB. The MyMathLab Course ID to be used for registration purposes only.To register for MyMathLab and to access the homework, go to www.coursecompass.com.

Notes:
  ❖ Be sure that your name in Connect Math exactly matches your name on Class Roster.
  ❖ No extra work is given for extra credit.
  ❖ No extra work is given to "bring up my grade" or because this is the "last class I need to graduate".

Calculator Policy: As with all developmental mathematics courses at HCC, **the use of a calculator during any exam, including the final exam, is prohibited** and will be considered cheating.

Exam Policy: There will be four major examinations plus the final exam**.** Each exam is worth 100 points. Before each exam, please clear your desk of all material except pencils/pens, erasers, and scratch work. In addition, please do not share any material during an exam.

Make-up Policy

Tests must be taken on the specified day. ***No MAKE-UP***examinations will be given. The final examination grade will be substituted for one missed test only, ***regardless of the reason***. If a second test is missed, the score for that test is zero.

Grading policy

Your course grade will be computed as follows:

Exam 1   15%
Exam 2   (Midterm)   15%
Exam 3   15%
Exam 4   15%
Homework   20%
Final exam   35%

One lowest major exam out of 4 will be dropped.

$$\text{Final Average Score} = \frac{\text{(Sum of 3 highest exams out of 4)}}{3} \times 0.45 + \text{HWK (MyMathLab)} \times 0.20 + \text{Final Exam} \times 0.35$$

Your final course grade is based on the following standard HCC scale.

Final Average	90 ≤ Avg ≤ 100	80 ≤ Avg< 90	70 ≤ Avg< 80	Avg< 70
Final Course Grade	A	B	C	F, IP, or FX

Final Exam Policy in Developmental Mathematics:

The following policy was adopted by Houston Community College regarding the system-wide Final Examinations in developmental mathematics courses:

a. Students who score less than 60% on the Final Examination or who have an overall course average less than 70% will be awarded a grade of "IP" or "F." The "IP" grade will be awarded to those students who took Math 0310 for the 1st time. The "F" grade will be awarded to those students who are repeating Math 0310.

b. Students who score 60% or higher on the Final Examination and whose overall course average is equal to or greater than 70%, will have their grades averaged and awarded a grade based upon the standard 10 point scale.

HCC Grading Scale:

A = 100 – 90 .... 4 points per semester hour
B = 89 – 80 .... 3 points per semester hour
C = 79 – 70........................ 2 points per semester hour
69 and below = F or IP ...... .0 points per semester hour
IP (In Progress) .... 0 points per semester hour
W (Withdrawn).................... 0 points per semester hour
I (Incomplete)..................... .0 points per semester hour
AUD (Audit) .... 0 points per semester hour

IP (In Progress) is given only in certain developmental courses. The student must re-enroll to receive credit. COM (Completed) is given in non-credit and continuing education courses. To compute grade point average (GPA), divide the total grade points by the total number of semester hours attempted. The grades "IP," "COM" and "I" do not affect GPA.

Note: The grade of "FX" is given when a student fails due to lack of attendance. A grade of "W" may be given on or before the official withdrawal date but not at the time of final grade submission.

Students with disabilities
HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including mental health, chronic or temporary medical conditions), please meet with a campus Abilities Counselor as soon as possible in order to establish reasonable accommodations. Reasonable accommodations are established through an interactive process between you, your instructor(s) and Ability Services. It is the policy and practice of HCC to create inclusive and accessible learning environments consistent with federal and state law. For more information, please go to
http://www.hccs.edu/district/students/disability-services/

Ability Services Contact Information

Central College	713-718-6164	
Coleman College	713-718-7376	
Northeast College	713-718-8322	
Northwest College	713-718-5422	713-718-5408
Southeast College	713-718-7144	
Southwest College	713-718-5910	
Adaptive Equipment/Assistive Technology	713-718-6629	713-718-5604
Interpreting and CART services	713-718-6333	

HCC Policy Statement: Title IX
Houston Community College is committed to cultivating an environment free from inappropriate conduct of a sexual or gender-based nature including sex discrimination, sexual assault, sexual harassment, and sexual violence. Sex discrimination includes all forms of sexual and gender-based misconduct and violates an individual's fundamental rights and personal dignity. Title IX prohibits discrimination on the basis of sex-including pregnancy and parental status-in educational programs and activities. If you require an accommodation due to pregnancy please contact an Abilities Services Counselor. The Director of EEO/Compliance is designated as the Title IX Coordinator and Section 504 Coordinator. All inquiries concerning HCC policies, compliance with applicable laws, statutes, and regulations (such as Title VI, Title IX, and Section 504), and complaints may be directed to:

David Cross
Director EEO/Compliance
Office of Institutional Equity & Diversity
3100 Main
Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
Phone number: (713) 718-8271

Basic Needs Security Statement
Any student who faces challenges securing their food or housing and believes this may affect their performance in the course is urged to contact the Dean of Students for support. Furthermore, please notify the professor if you are comfortable in doing so. This will enable us to provide any resources that HCC may possess.

Campus Carry – HCC
At HCC the safety of our students, staff, and faculty is our first priority. As of August 1, 2017, Houston Community College is subject to the Campus Carry Law (SB11 2015). For more information, visit the HCC Campus Carry web page at http://www.hccs.edu/district/departments/police/campus-carry/

HCC Policy Statement: Academic Honesty
A student who is academically dishonest is, by definition, not showing that the coursework has been learned, and that student is claiming an advantage not available to other students. The instructor is responsible for measuring each student's individual achievements and also for ensuring that all students compete on a level playing field. Thus, in our system, the instructor has teaching, grading, and enforcement roles. You are expected to be familiar with the University's Policy on Academic Honesty, found in the catalog. What that means is: If you are charged with an offense, pleading ignorance of the rules will not help you. Students are responsible for conducting themselves with honor and integrity in fulfilling course requirements. Penalties and/or disciplinary proceedings may be initiated by College System officials against a student accused of scholastic dishonesty. "Scholastic dishonesty": includes, but is not limited to, cheating on a test, plagiarism, and collusion.

<u>Cheating</u> on a test includes:
- Copying from another students' test paper;
- Using materials not authorized by the person giving the test;
- Collaborating with another student during a test without authorization;
- Knowingly using, buying, selling, stealing, transporting, or soliciting in whole or part the contents of a test that has not been administered;
- Bribing another person to obtain a test that is to be administered.

<u>Plagiarism</u> means the appropriation of another's work and the unacknowledged incorporation of that work in one's own written work offered for credit.

<u>Collusion</u> mean the unauthorized collaboration with another person in preparing written work offered for credit. Possible punishments for academic dishonesty may include a grade of 0 or F in the particular assignment, failure in the course, and/or recommendation for probation or dismissal from the College System. (See the Student Handbook)

HCC Policy Statements
*Class Attendance - It is important that you come to class!*Attending class regularly is the best way to succeed in this class. Research has shown that the single most important factor in student success is attendance. Simply put, going to class greatly increases your ability to succeed. You are expected to attend all lecture and labs regularly. You are responsible for materials covered during your absences. Class attendance is checked daily. Although it is your responsibility to drop a course for nonattendance, the instructor has the authority to drop you for excessive absences.

If you are not attending class, you are not learning the information. As the information that is discussed in class is important for your career, students may be dropped from a course after accumulating absences in excess of six (6) hours of instruction. The six hours of class time would include any total classes missed, for excessive tardiness or for leaving class early.

You may decide NOT to come to class for whatever reason. As an adult making the decision not to attend, you do not have to notify the instructor prior to missing a class. However, if this happens too many times, you may suddenly find that you have "lost" the class.
Poor attendance records tend to correlate with poor grades. If you miss any class, including the first week, <u>you are responsible for all material missed.</u> It is a good idea to find a friend or a buddy in class who would be willing to share class notes or discussion or be able to hand in paper if you unavoidably miss a class.Class attendance equals class success.

HCC Course Withdrawal Policy
If you feel that you cannot complete this course, you will need to withdraw from the course prior to the final date of withdrawal, you **MUST** contact a HCC counselor or your professor prior to withdrawing (dropping) the class for approval and this must be done **PRIOR** to the withdrawal deadline to receive a "W" on your transcript. **Final withdrawal deadlines vary each semester and/or depending on class length, please visit the online registration calendars, HCC schedule of classes and catalog, any HCC Registration Office, or any HCC counselor to determine class withdrawal deadlines. *Remember to allow a 24-hour response time when communicating via email and/or telephone with a professor and/or counselor. Do not submit a request to discuss withdrawal options less than a day before the deadline.* If you do not withdraw before the deadline, you will receive the grade that you are making in the class as your final grade. If you wish to drop the class, then it is your responsibility to do that before the final drop date. *Neither you nor your instructor will be able to perform the drop after the final drop date and I will not drop you for nonattendance.*

The last day to withdraw from this course with a grade of W is October 1st, 2018.

ATTENDANCE POLICY: Attendance is compulsory and is checked during every class.When you have accumulated 12.5 %or 6 hoursofabsences, the instructor is obligated by law to drop you from the class. *It is your responsibility to be sure that you are marked present before leaving the class.* Students are expected to attend class regularly, and they are responsible for materials covered during their absences. Students can contact their friends or myself if available regarding it. The nature of the course is such that perfect attendance is essential for mastery of the course content. A missed class can never be duplicated.

INSTRUCTIONS POLICY: All instructions given in class must be followed strictly. No excuse shall be accepted if you do not follow or miss instructions. It is your responsibility to clarify the doubts immediately.

Repeat Course Fee

The State of Texas encourages students to complete college without having to repeat failed classes. To increase student success, students who repeat the same course more than twice are required to pay extra tuition. The purpose of this extra tuition fee is to encourage students to pass their courses and to graduate. Effective fall 2006, HCC will charge a higher tuition rate to students registering the third or subsequent time for a course. If you are considering course withdrawal because you are not earning passing grades, confer with your instructor/counselor as early as possible about your study habits, reading and writing homework, test taking skills, attendance, course participation, and opportunities for tutoring or other assistance that might be available.

Classroom Behavior

As your instructor and as a student in this class, it is our shared responsibility to develop and maintain a positive learning environment for everyone. Your instructor takes this responsibility very seriously and will inform members of the class if their behavior makes it difficult for him/her to carry out this task. As a fellow learner, you are asked to respect the learning needs of your classmates and assist your instructor achieve this critical goal.

Misuse of Electronic Devices in the Classroom

The use of electronic devices by students in the classroom is up to the discretion of the instructor. Any use of such devices for purposes other than student learning is strictly prohibited unless authorized as an appropriate ADA accommodation from the ADA Counselor.

Personal Communication Device Policy

All personal communication devices (any device with communication capabilities including but not limited to cell phones, blackberries, pagers, cameras, palmtop computers, lap tops, PDA's, radios, headsets, portable fax machines, recorders, organizers, databanks, and electronic dictionaries or translators) must be muted or turned off during class. Such activity during class time is deemed to be disruptive to the academic process. Personal communication devices are to not be on the student desk during examinations. Usage of such devices during exams is expressly prohibited during examinations and will be considered cheating (see academic honesty section above).

Instructor Requirements

As your Instructor, it is my responsibility to**:**
- Provide the grading scale and detailed grading formula explaining how student grades are to be derived
- Facilitate an effective learning environment through class activities, discussions, and lectures
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness and make up
- Provide the course outline and class calendar which will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

To be successful in this class, it is the student's responsibility to**:**
- Attend class and participate in class discussions and activities
- Read and comprehend the textbook
- Complete the required assignments and exams:
- Complete Chapter Exams, MyMathLab Homework, Final Exam
- Ask for help when there is a question or problem

Keep copies of all paperwork, including this syllabus, handouts and all assignments**.**

FINAL GRADE OF FX Students who stop attending class and do not withdraw themselves prior to the withdrawal deadline may either be dropped by their professor for excessive absences or be assigned the final grade of "FX" at the end of the semester. Students who stop attending classes will receive a grade of "FX", compared to an earned grade of "F" which is due to poor performance.

Please note that HCC will not disperse financial aid funding for students who have never attended class. Students who receive financial aid but fail to attend class will be reported to the Department of Education and may have to pay back their aid. A grade of "FX" is treated exactly the same as a grade of "F" in terms of GPA, probation, suspension, and satisfactory academic progress.

Resources

The HCC Tutoring Centers provide free tutoring for individual subjects offered at specific times throughout the week on various campuses. There is no need to make an appointment. If you need a tutor, visit: www.hccs.edu/findatutor for times and locations. For more information about tutoring at HCC, visit www.hccs.edu/district/students/tutoring.

Additional help is also available through Student Support Services. Students can get free assistance, 24 hours a day, 7 days a week, in Math, English and other subjects, at https://hccs.upswing.io/.   Typically, posted questions are answered by an HCC tutor or faculty within 24 hours (usually under 6 hours). There are also several online math resources that you can find with an internet search. You may also find information on the Learning Web site accessible through your specific HCCS campus website.

EGLS3 -- Evaluation for Greater Learning Student Survey System
At Houston Community College, professors believe that thoughtful student feedback is necessary to improve teaching and learning. During a designated time, you will be asked to answer a short online survey of research-based questions related to instruction. The anonymous results of the survey will be made available to your professors and division chairs for continual improvement of instruction. Look for the survey as part of the Houston Community College Student System online near the end of the term. Visit www.hccs.edu/EGLS3 for more information.

Administration contact information

College - Level Math Courses

Chair of Math	Susan Fife	SW Campus	713-718-7241	Stafford, Scarcella, N108
- Admin. Assistant	Tiffany Pham	SW Campus	713-718-7770	Stafford, Scarcella, N108
- Admin. Assistant	Christopher Cochran	SW Campus	713-718-2477	Stafford, Scarcella, N108
Math Assoc. Chair	Jaime Hernandez	CE Campus	713-718-7772	San Jacinto Building, Rm 369
Math Assoc. Chair	Ernest Lowery	NW Campus	713-718-5512	Katy Campus Building, Rm 112
Math Assoc. Chair	Mahmoud Basharat	NE Campus	713-718-2438	Codwell Hall Rm 105

Developmental Math Courses

Chair of Dev. Math	Marisol Montemayor	SE Campus	713-718-7153	Felix Morales Building, Rm 124
- Admin. Assistant	Carmen Vasquez	SE Campus	713-718-7056	Felix Morales Building, Rm 124
Dev. Math Assoc. C	Hien Nguyen	SE Campus	713-718-2440	Felix Morales Building, Rm 124
Dev. Math Assoc. C	Jack Hatton	NE Campus	713-718-2434	Northline Building, Room 321
Technical Support Specialist	Douglas Bump	SE Campus	713-718-7317	Angela Morales Building, Rm 101

For issues related to your class, please first contact your instructor.
If you need to contact departmental administration, then contact the appropriate Associate Chair.
If further administrative contact is necessary, then contact the appropriate Department Chair.