



**Division of Mathematics
Mathematics Department**

<https://learning.hccs.edu/programs/mathematics>

**Math 1325: Calculus for Business & Social Sciences | Lecture |
#14212**

Spring 2020 | 16 Weeks (1/21/2020- 5/14/2020)
In-Person | Stafford Scarcella W106 | MW 8:00am 9:20am

3 Credit Hours | 48 hours per semester

Instructor Contact Information

Instructor:	Eunice Kallarackal	Office Phone:	713-718-5578
Office:	LHUB Room 303.2	Office Hours:	MW 8 am-9:30am TTH 11 am – 12 pm
HCC Email:	eunice.kallarackal@hccs.edu	Office Location:	Stafford Campus

Please feel free to contact me concerning any problems that you are experiencing in this course. Your performance in my class is very important to me. I am available to hear the concerns and just to discuss course topics.

Instructor's Preferred Method of Contact

You may contact me via my HCC email. Please use your school email to do so. I will respond to emails within 24 hours Monday through Friday; I will reply to weekend messages on Monday mornings.

What's Exciting about This Course?

This course is the basic study of calculus concepts like limits, continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences.

My Personal Welcome

Welcome to Calculus for Business and Social Sciences. I am delighted that you have chosen this course! I will present the calculus concepts in an exciting way, so that you can grasp the concepts and apply them to real life situations.

Some topics may challenge you, but remember I am available to support you.

Prerequisites

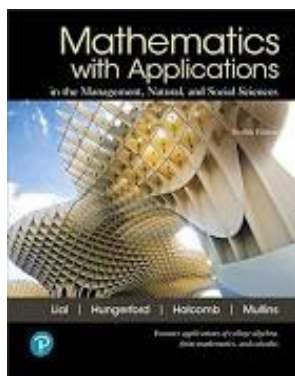
Prerequisites: A grade of C or better in Math 1314 or its equivalent. A grade of C or better in MATH 1324 or the equivalent. If you have enrolled in this course having satisfied these prerequisites, you have a higher chance of success than students who have not done so. Please carefully read and consider the repeater policy in the [HCCS Student Handbook](#).

Canvas Learning Management System

This section of MATH 1325 will use [Canvas \(https://eagleonline.hccs.edu\)](https://eagleonline.hccs.edu) to input grades and to access your homework. HCCS Open Lab locations may be used to access the Internet and Canvas. **USE [FIREFOX](#) OR [CHROME](#) AS THE INTERNET BROWSER.**

Instructional Materials

Textbook Information



The textbook listed below is **required** for this course.

Mathematics with Applications In the Management, Natural, and Social Sciences; 12th ed.; By Margaret Lial, Thomas Hungerford, John Holcomb, Jr., Bernadette Mullins. Pearson. ISBN-13: 978-0135335215

It is included in a package that contains the text as well as an access code and are found at the [HCC Bookstore](#). You may either use a hard copy of the book or the e-book through MyMathLab.

Other Instructional Resources

Tutoring

HCC provides free, confidential, and convenient academic support, including writing critiques, to HCC students in an online environment and on campus. Tutoring is provided by HCC personnel in order to ensure that it is contextual and appropriate. Visit the [HCC Tutoring Services](#) website for services provided.

Libraries

The HCC Library System consists of 9 libraries and 6 Electronic Resource Centers (ERCs) that are inviting places to study and collaborate on projects. Librarians are available both at the libraries and online to show you how to locate and use the resources you need. The libraries maintain a large selection of electronic resources as well as collections of books, magazines, newspapers, and audiovisual materials. The portal to all libraries' resources and services is the HCCS library web page at <http://library.hccs.edu>.

Supplementary Instruction

Supplemental Instruction is an academic enrichment and support program that uses peer-assisted study sessions to improve student retention and success in historically difficult courses. Peer Support is provided by students who have already succeeded in completion of the specified course, and who earned a grade of A or B. Find details at <http://www.hccs.edu/resources-for/current-students/supplemental-instruction/>.

Course Overview

The intent of this course is to provide the student certain manipulative skills with limits insofar as they apply to concrete but elementary problems in the social and natural sciences. Mathematical rigor will be kept to a minimum. This course is a survey of differential and integral calculus including the study of functions and graphs from a calculus viewpoint as applied to problems in business and the natural and social sciences.

Core Curriculum Objectives (CCOs)

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

Program Student Learning Outcomes (PSLOs)

Students in the Mathematics Program will:

1. Engage in problem solving strategies, such as organizing information, drawing diagrams and modeling.
2. Use symbolic representations to solve problems. This includes manipulating formulas, solving equations, and graphing lines.
3. Build the foundational mathematical skills that will enable a student to successfully complete a college level mathematics course.

Course Student Learning Outcomes (CSLOs)

Upon completion of MATH 1325, the student will be able to:

1. Apply calculus to solve business, economics, and social sciences problems.
2. Apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions.
3. Solve application problems involving implicit differentiation and related rates.
4. Solve optimization problems with emphasis on business and social sciences applications.
5. Determine appropriate technique(s) of integration.

6. Integrate functions using the method of integration by parts or substitution, as appropriate.
7. Solve business, economics, and social sciences applications problems using integration techniques.

Learning Objectives

Upon completion of MATH 1325, the student will be able to:

1. Find the limit of a function as x approaches a .
2. Find the average and instantaneous rate of change.
3. Use a limit to find the derivative of a function.
4. Use the quotient rule to find the derivative of a function.
5. Use the power rule to find the derivative of a function.
6. Find the derivative of exponential and logarithmic functions.
7. Tell if a function is continuous at given values of x .
8. Find the absolute extrema of a given function.
9. Use the second derivative to find all relative extrema for a function.
10. Use derivatives for various applications and sketching of curves.
11. Find antiderivatives for indefinite integrals and find indefinite integrals using substitution.
12. Given a definite integral, find the area under the curve.
13. Evaluate the results of a summation.
14. Using the fundamental theorem of calculus, evaluate definite integrals.
15. Apply definite integrals for various applications and use the table of integrals to find antiderivatives.
16. Find general solutions for given differential equations.
17. Graph the first octant portion of a given plane.
18. Given a function $f(x,y)$, find all second-order partial derivatives.
19. Given a function $f(x,y)$, find the values of any relative extrema and identify saddle points.

Student Success

Expect to spend at least twice as many hours per week outside of class as you do in class studying the course content. Additional time will be required for written assignments. The assignments provided will help you use your study hours wisely. Successful completion of this course requires a combination of the following:

- Reading the textbook
- Attending class in person and/or online
- Completing assignments
- Participating in class activities

There is no short cut for success in this course; it requires reading (and probably re-reading) and studying the material using the course objectives as a guide.

Instructor and Student Responsibilities

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 learner-centered instructional techniques
- Provide a description of any special projects or assignments
- Inform students of policies such as attendance, withdrawal, tardiness, and making up assignments
- Provide the course outline and class calendar that will include a description of any special projects or assignments
- Arrange to meet with individual students before and after class as required

As a student, it is your responsibility to:

- Attend class in person and/or online
- Participate actively by reviewing course material, interacting with classmates, and responding promptly in your communication with me
- Read and comprehend the textbook
- Complete the required assignments and exams
- Ask for help when there is a question or problem
- Keep copies of all paperwork, including this syllabus, handouts, and all assignments
- Be aware of and comply with academic honesty policies in the HCCS Student Handbook

Assignments, Exams, and Activities

Exams

There will be three exams and a comprehensive final exam.

Quizzes

In addition to exams you will have six quizzes which are normally given at the beginning of the class. Each quiz is worth 20points. I will drop one lowest quiz grade. There is no make up for the quiz. If you miss a quiz for any reason that quiz grade will be zero. Come to class on time.

Homework

Homework is assigned online in mymathlab. Go to mymathlab.com to register to do the homework. The course id for your class is kallarakal51258. You also need an access code which you have to purchase either online or from the bookstore. Sign up for the homework the first day itself. If you are waiting for the financial aid, Pearson offers free trial access for 13days. So there is no excuse for not signing up for the homework the first day. Homework for all sections included in an exam is due on the day of the exam. Once closed homework will not be reopened. At the end of the semester you may realize that had you done the homework your grade would have improved, but then it will be too late to improve your grade.

Final Exam

All students will be required to take a cumulative Final exam.

CALENDAR

Tentative Dates for Exams:

Exam 1 (1.3, 2.3, 3.7, 4.1, 4.3, and 11.1 – 11.5): February 18, 2020

Exam 2 (11.6 – 11.9, 12.1 – 12.6): March 31, 2020

Exam 3 (13.1 – 13.7): April 28, 2020

Final Exam (Comprehensive including 14.1 – 14.3): May 12, Tuesday 9 AM

Grading Formula

All grades will be posted in Canvas.

Exam 1	15% of your grade
Exam 2	15% of your grade
Exam 3	15% of your grade
Homework	15% of your grade
Quizzes	15% of your grade
Final Exam	25% of your grade

Grade	Overall Percentage
A	90% +
B	80%-89%
C	70%- 79%
D	60%-69%
F	<60%

Incomplete Policy:

In order to receive a grade of Incomplete ("I"), a student must have completed at least 85% of the work in the course. In all cases, the instructor reserves the right to decline a student's request to receive a grade of Incomplete.

HCC Grading Scale can be found on this site under Academic Information:
<http://www.hccs.edu/resources-for/current-students/student-handbook/>

Course Calendar

Week	Dates	Topic/What's due
1	1/21,1/23	Syllabus Sec1.3,2.3,3.6
2	1/28,1/30	4.1,4,3,11.1
3	2/4,2/6	11.2,11.3,11.4
4	2/11,2/13	11.5, Review
5	2/18,2/20	Exam 1, 11.6
6	2/25,2/27	11.7,11.8,11.9
7	3/3,3/5	12.1,12.2,
8	3/10,3/12	12.3,12.4,
9	3/24,3/26	12.5,12.6, Review
10	3/31,4/1	Exam 2,13.1
11	4/7,4/9	13.2,13.4

12	4/14,4/16	13.5,13.6
13	4/21,4/23	13.7,Review
14	4/28,4/30	Exam3,14.1,14.2
15	5/5,5/7	Sec14.3, Review
16	12/10	Final Exam

Syllabus Modifications

The instructor reserves the right to modify the syllabus at any time during the semester and will promptly notify students in writing, typically by e-mail, of any such changes.

Instructor's Practices and Procedures

Missed Assignments

There is no make-up for any exams or quizzes in this course. However I will allow you to replace the lowest of your 3 exam grades with the final exam grade, if the final exam grade is higher. Note that quiz grade will not be replaced. I will drop one quiz grade.

Academic Integrity

All forms of academic dishonesty including, but not limited to cheating, plagiarism, and collusion are serious offenses. If you cheat or help someone cheat on an assignment, your grade for that assignment will be 0 and that grade cannot be replaced. I will report it to authorities and will recommend probation.

Here's the link to the HCC information about academic integrity (Scholastic Dishonesty and Violation of Academic Scholastic Dishonesty and Grievance):

<http://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-procedures/>

Attendance Procedures

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. 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. **You are considered absent if you miss more than 15 minutes of instruction, which includes arriving late to class, leaving early from class and/or taking long breaks during class hours. 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 or for excessive tardiness or leaving class early.

Poor attendance records tend to correlate with poor grades. If you miss any class, including the first week, you are responsible for all material missed. 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 your work if you unavoidably miss a class.

The last day to withdraw is April 6, 2020.

Student Conduct

It is our shared responsibility to develop and maintain a positive learning environment for everyone. As your instructor, I take this responsibility very seriously and require you to respect the learning needs of your classmates and assist me. If your behavior disrupts the class you will be asked to leave the class and it will be reported.

Calculators

You may use a non-graphing non programmable calculator for this class. Graphing calculators are not allowed. For some exams and quizzes no calculator will be allowed.

Electronic Devices

The use of electronic devices by students in the classroom is not allowed in my class. Any use of such devices for the purposes other than student learning is strictly prohibited unless authorized as an appropriate ADA accommodation from the ADA Counselor. Cell phones must be silenced and put away.

Mathematics Program Information

- HCC Math Student Organizations: Mu Alpha Theta: Application:
<https://www.hccs.edu/resources-for/current-students/stem--science-technology-engineering--mathematics/stem-clubs/mu-alpha-theta-application/>

HCC Policies

Here's the link to the HCC Student Handbook <http://www.hccs.edu/resources-for/current-students/student-handbook/> In it you will find information about the following:

- Academic Information
- Academic Support
- Attendance, Repeating Courses, and Withdrawal
- Career Planning and Job Search
- Childcare
- disAbility Support Services
- Electronic Devices
- Equal Educational Opportunity
- Financial Aid TV (FATV)
- General Student Complaints
- Grade of FX
- Incomplete Grades
- International Student Services
- Health Awareness
- Libraries/Bookstore
- Police Services & Campus Safety
- Student Life at HCC
- Student Rights and Responsibilities
- Student Services
- Testing
- Transfer Planning
- Veteran Services

EGLS³

The EGLS³ ([Evaluation for Greater Learning Student Survey System](#)) will be available for most courses near the end of the term until finals start. This brief survey will give invaluable information to your faculty about their teaching. Results are anonymous and will be available to faculty and division chairs after the end of the term. EGLS³ surveys are only available for the Fall and Spring semesters. -EGLS3 surveys are not offered during the Summer semester due to logistical constraints.

<http://www.hccs.edu/resources-for/current-students/egls3-evaluate-your-professors/>

Campus Carry Link

Here's the link to the HCC information about Campus Carry:

<http://www.hccs.edu/departments/police/campus-carry/>

HCC Email Policy

When communicating via email, HCC requires students to communicate only through the HCC email system to protect your privacy. If you have not activated your HCC student email account, you can go [to HCC Eagle ID](#) and activate it now. You may also use Canvas Inbox to communicate.

Housing and Food Assistance for Students

Any student who faces challenges securing their foods or housing and believes this may affect their performance in the course is urged to contact the Dean of Students at their college for support. Furthermore, please notify the professor if you are comfortable in doing so.

This will enable HCC to provide any resources that HCC may possess.

Office of Institutional Equity

Use the link below to access the HCC Office of Institutional Equity, Inclusion, and Engagement (<http://www.hccs.edu/departments/institutional-equity/>)

disAbility Services

HCC strives to make all learning experiences as accessible as possible. If you anticipate or experience academic barriers based on your disability (including long and short term conditions, 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/support-services/disability-services/>

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
 (713) 718-8271
 Houston, TX 77266-7517 or Institutional.Equity@hccs.edu
<http://www.hccs.edu/departments/institutional-equity/title-ix-know-your-rights/>

Office of the Dean of Students

Contact the office of the Dean of Students to seek assistance in determining the correct complaint procedure to follow or to identify the appropriate academic dean or supervisor for informal resolution of complaints.

<https://www.hccs.edu/about-hcc/procedures/student-rights-policies--procedures/student-complaints/speak-with-the-dean-of-students/>

Department Chair 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	Jack Hatton	SE Campus	713-718-2434	Felix Morales Building, Rm 124
- Admin. Assistant	Carmen Vasquez	SE Campus	713-718-7056	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Hien Nguyen	SE Campus	713-718-2440	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Adnan Ulhaque	SW Campus	713-718-5463	Stafford, Learning Hub, Room 208
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.