Mathematics
Northwest College: Alief - Hayes Campus
Math 1325: Elements of Calculus with Applications
CRN 73728 – Fall 2015
Room B211| 11:00AM – 12:30PM| Mon and Wed
3 hour lecture course / 48 hours per semester/ 16 weeks
Textbook: Mathematics with Applications; 10th ed.; Lial, Margaret L
ISBN-13: 978-0-321-64553-1

Instructor: Branson Brade

Instructor Contact Information:

E-mail: branson.brade@hccs.edu
Office Phone: 713-718-6258   Office Hours: TTh 11:30 – 1:00 pm, MW 12:30 – 2:00pm
Office: or by appointment
Department Phone: 713-718-5511

Course Description
MATH 1325: Elements of Calculus with Applications. 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.

Prerequisites
A grade of C or better in MATH 1314 or the grade of C or better in Math 1324 or the equivalent.

Course Goal
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.

Course Student Learning Outcomes (SLO):
1. Find limits of functions and determine continuity of functions.
2. Find derivatives of algebraic, logarithmic, and exponential functions, and use derivatives to solve applied problems and produce graphs.
3. Find integrals, either approximate and exact, of some algebraic and exponential functions, and use integrals to solve applied problems.
4. Find partial derivatives of multi-dimensional functions, and use partial derivatives to solve applied problems and produce graphs.

Learning outcomes
Students will:
1.1 Find the limit of a function as x approaches a.
1.2 Find the average and instantaneous rate of change.
1.3 Use a limit to find the derivative of a function.
1.4 Tell if a function is continuous at given values of x.
2.1 Use the quotient rule to find the derivative of a function.
2.2 Use the power rule to find the derivative of a function.
2.3 Find the derivative of exponential and logarithmic functions.
2.4 Find the absolute extrema of a given function.
2.5 Use the second derivative to find all relative extrema for a function.
2.6 Use derivatives for various applications and sketching of curves.
3.1 Find antiderivatives for indefinite integrals and find indefinite integrals using substitution.
3.2 Given a definite integral, find the area under the curve.
3.3 Evaluate the results of a summation.
3.4 Using the fundamental theorem of calculus, evaluate definite integrals.
3.5 Apply definite integrals for various applications and use the table of integrals to find antiderivatives .
3.6 Find general solutions for given differential equations.
4.1 Graph the first octant portion of a given plane.
4.2 Given a function f(x,y), find all second-order partial derivatives.
4.3 Given a function f(x,y), find the values of any relative extrema and identify saddle points.

CALENDAR

Tentative Instructional Outline:

Week Number	Reading Assignment	Reference Chapters
1	1.3, 2.3	
1	3.7, 4.1	
2	4.3, 11.1	
2	11.2, 11.3	
3	LABOR DAY	
3	11.4, Review	
4	TEST #1	
4	11.5	Chapter 11.5-9
5	11.6, 11.7	
5	11.8	
6	11.9, Review	
6	TEST #2	
7	12.1	Chapter 12
7	12.2	
8	12.3	
8	12.4	
	10/17	
9	Review	
9	Test #3	
10	13.1	Chapter 13 &14
10	13.2	
11	13.3, 13.4	
11	13. 5	
12	13.7	
12	14.1	
13	14.2	
13	Review	
14	TEST #4	
14	THANKSGIVING	
15	14.3	
15	REVIEW FOR COMPREHENSIVE FINAL	
16	FINAL EXAM Monday , December 7, 2015 at 11:00am – 1:00pm	
16		

Instructional Methods

The learning of mathematics can be viewed as a complex dialectal relationship between entities which most often include but may not be limited to content, instruction and tools. As your instructor my commitment is to modulate and simplify that relationship, with your willingness off course, to the point where learning becomes the necessary and only consequence of that interaction. My desire is for you to succeed so I committed to it. To this end I will clarify and explain concepts in class, model for you by solving carefully selected examples and then give you opportunities to replicate my behavior while under my guidance. I will also expect you to attend and be prepared for class, read your textbook, consistently solve the homework problems, seek help and help each other. It is instructive that you set up a routine and pursue your goal passionately.

Student Assignments

Students are expected to complete Homework assignments online using MyMathLab software, outside regular class time. The software is available from either the HCCS Bookstore or online at www.coursecompass.com. This will count for 15% of your

grade. **MyMathLab Instructor Course ID: brade92926 .** You will have to buy an access code. Homework will be closed at the time of the final exam.

Assessments
Four major tests will be given and the lowest grade being dropped will count for 60% of your grade. The computer MyMathLab homework assignments will count as 15% and a comprehensive final exam will count for 25%

Your grade will be determined by the following	Details		% Final Average
Exams	Highest three of four exams		60
Homework	MyMathLab (computer based)		15
Final Exam	Comprehensive December 7, 2-4PM		25
Total			100 %

MAKEUP POLICY: Makeups for tests will be given only if you (1) contact me as soon as you know you must miss the test, and (2) take the makeup before the graded tests are returned to the class. Do not miss a test on purpose, as makeups are generally more difficult. Tests which are not made up will be considered your lowest test grade and will be dropped. If you miss a second test you will receive a zero – no exceptions.

Letter Grade Assessment:

Letter Grade	Final Average in Percent
A	90-100%
B	80-89%
C	70-79%
D	60-69%
F	0-59%

HCC Policy Statement - ADA

Services to Students with Disabilities

Any student with a documented disability (e.g. physical, learning, psychiatric, vision, hearing, etc.) who needs to arrange reasonable accommodations must contact the Disability Services Office at his or her respective college at the beginning of each semester. Faculty members are authorized to provide only the accommodations requested by the Disability Support Services Office. Persons needing accommodations due to a documented disability should contact the ADA counselor for their college as soon as possible. For questions, please contact Donna Price at 713.718.5165. To visit the ADA Web site, please visit www.hccs.edu then click Future students, scroll down the page and click on the words Disability Information.

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.

Cheating 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 not yet administered;

- Bribing another person to obtain a test that is to be administered.

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

Collusion 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)

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HCC Policy Statement: Title IX
HCC is committed to provide a learning and working environment that is free from discrimination on the basis of sex which includes all forms of sexual misconduct. Title IX of the Education Amendments of 1972 requires that when a complaint is filed, a prompt and thorough investigation is initiated. Complaints may be filed with the HCC Title IX Coordinator available at 713 718-8271 or email at oie@hccs.edu.

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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 be on time at the beginning of each class period. For complete information regarding Houston Community College's policies on attendance, please refer to the Student Handbook. 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 or for excessive tardiness or 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, 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

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. Before, you withdraw from your course; please take the time to meet with the instructor to discuss why you feel it is necessary to do so. The instructor may be able to provide you with suggestions that would enable you to complete the course. Your success is very important. Beginning in fall 2007, the Texas Legislature passed a law limiting first time entering freshmen to no more than **SIX** total course withdrawals **throughout** their educational career in obtaining a certificate and/or degree.

To help students avoid having to drop/withdraw from any class, HCC has instituted an Early Alert process by which your professor *may* "alert" you and HCC counselors that you might fail a class because of excessive absences and/or poor academic performance. It is your responsibility to visit with your professor or a counselor to learn about what, if any, HCC interventions might be available to assist you – online tutoring, child care, financial aid, job placement, etc. – to stay in class and improve your academic performance.

If you plan on withdrawing from your class, 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. **The last day to withdraw is 10/30/2015**.

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
Students are expected to behave in a manner consistent with the enhancement of the Teaching and Learning process. Please arrive on time for class and refrain from leaving early except in an emergency. Out of courtesy for others, please turn off all personal communication devices (any communication device not limited to cell phones). Personal communication devices should not be on the student's desk during examinations. Usage of such devices during exams is expressly prohibited during examinations and will be considered cheating. The use of laptop computers or other technology is not permitted in class unless special permission is granted.

Calculator Policy
Calculators are permitted, but you may not use a differentiation or symbolic integration utility on tests. (e.g. you may not use TI-89 or TI-92). The use of other graphing calculators may also be restricted on some tests. All appropriate work must be shown or full credit will not be awarded.

Use of Camera and/or Recording Devices
As a student active in the learning community of this course, it is your responsibility to be respectful of the learning atmosphere in your classroom. To show respect of your fellow students and instructor, you will turn off your phone and other electronic

devices, and will not use these devices in the classroom unless you receive permission from the instructor.

Use of recording devices, including camera phones and tape recorders, is prohibited in classrooms, laboratories, faculty offices, and other locations where instruction, tutoring, or testing occurs. Students with disabilities who need to use a recording device as a reasonable accommodation should contact the Office for Students with Disabilities for information regarding reasonable accommodations

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).

Student Course Reinstatement Policy:

Students have a responsibility to arrange payment for their classes when they register, either through cash, credit card, financial aid, or the installment plan. Faculty members have a responsibility to check their class rolls regularly, especially during the early weeks of a term, and reconcile the official class roll to ensure that no one is attending class whose name does not appear on it. Students who are dropped from their courses for nonpayment of tuition and fees who request reinstatement after the official date of record (OE Date) can be reinstated by making payment in full and paying an additional \$75 per course reinstatement fee. A student requesting reinstatement should present the registrar with a completed **Enrollment Authorization Form** with the signature of the instructor, department chair, or dean who should verify that the student has been attending class regularly. Students who are reinstated are responsible for all course policies and procedures, including attendance requirements.

Resources:

Free tutoring is available in Tutoring Center. 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 www.hccs.askonline.net. 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.

EGLS$_3$ -- 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	Jaime Hernandez	SW Campus	713-718-7772	Stafford, Scarcella, N108
- Secretary		SW Campus	713-718-7770	Stafford, Scarcella, N108
Math Assoc. Chair	Roderick McBane	CE Campus	713-718-6644	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	Susan Fife	SE Campus	713-718-7241	Felix Morales Building, Rm 124

- Secretary	Carmen Vasquez	SE Campus	713-718-7056	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Marisol Montemayor	SE Campus	713-718-7153	Felix Morales Building, Rm 124
Dev. Math Assoc. Chair	Jack Hatton	NE Campus	713-718-2434	Northline Building, Room 321

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.