

**Central Park Campus
Fall 2016**

Course Number: MATH – 1325

Course Title: Calculus for Business and Economics I

Instructor's Information:

Instructor's Name: Brandy S. Jumper

Office Number: C 218 (*Main Building*) @CPC

Office Hours: MW 12 – 12:45 PM, 3 – 4 PM & TR 11:30 a.m. – 2 PM, & F “*By appointment only*”. The Associate Faculty Office is B-342 and the telephone number is 972.548.6830.

Phone number: 972.548.6614 (Office Voicemail).

Email & Website: bjumper@collin.edu & <http://iws.collin.edu/bjumper/>

Department office contact in case of emergencies: Office of Academic Affairs, B-122 G and the telephone number is 214.491.6270.

Class Information:

Section Number: C03

Meeting Times: TR 2:30 PM – 3:45 PM (August 22, 2016 – December 11, 2016)

Meeting Location: CPC (Library) LA 238

CRN: 50933

Minimum Technology Requirement: All students will be expected to bring a graphing calculator to class on a daily basis. Check your college e-mail daily (**return my e-mails in a timely manner**). If you have not already, sign up for Cougar Alert. You can find details regarding the Cougar Alert system at <http://www.collin.edu/cougaralert.html>

Minimum Student Skills or Technical Skills: All students will be expected to take notes in class on a daily basis. All students will be expected to maintain prerequisite mathematics skills.

Netiquette Expectations: All students will be expected to check e-mail correspondence prior to each class meeting. Reminders will be sent for all Labs and Tests/Exams. All students will be expected to check CANVAS <https://collin.instructure.com/> for resources and **grades** on a daily basis. Your professor has **no access** to your login name or password for either CougarWeb or CANVAS.

Course Description: This course is the basic study of limits and continuity, differentiation, optimization and graphing, and integration of elementary functions, with emphasis on applications in business, economics, and social sciences. This course is not a substitute for MATH 2413 – Calculus I. Graphing calculator required. Lab required.

Course Credit Hours: (3 Credit Hours)

Lecture Hours: 3 (*weekly contact hours*)

Lab Hours: 1 (*weekly contact hours*)

Course Delivery Method: Lecture/Lab. Written Labs included.

Placement Assessment(s): Prior to enrolling in this course, the student must demonstrate eligibility to enroll in the following: MATH 1316, MATH 1325, MATH 1350, MATH 2373, or higher.

Prerequisite: MATH 1314, or MATH 1324, or MATH 1414; or equivalent.

Course Resources: The College provides group tutoring and a Math Lab at no charge at each campus to support student success in this class. The Central Park Campus **Math Tutoring Lab** is located in the main building room **C 220**. We will not be using MyMathLab online component for this course.

Supplies: A graphing calculator is required and the TI-NSPIRE, TI-NSPIRE **CX**, TI 83, TI 83 Plus, TI 84, or TI 84 Plus, TI 84 **C**, TI 84 Plus **C**, or TI 84 Plus **CE** is preferred. Calculators with a computer algebra system (**CAS**) will **not** be **permitted**. Students will be expected to bring textbook, calculator, pencil and paper to class and take notes accordingly. The following calculators are **NOT ALLOWED** for this class: TI 89 OR TI 92 OR THE TI- NSPIRE (CAS).

Textbook: *Calculus with Applications*, Custom 10th Edition by Lial / Greenwell / Ritchey. **The textbook is required.** New textbooks are available at Collin's Bookstores, and used textbooks are available at Half-Priced Books; Pearson Publishing. **ISBN-10:** 0 – 321 – 74900 – 6 and **ISBN-13:** 978 – 0 – 321 – 74900 – 0

Student Learning Outcomes:

Upon successful completion of this course, students should be able to do the following:

1. Calculate the rate of change of a function, both over an interval and instantaneously (EQ)
2. Use the derivative to compute rates of change and analyze marginal changes in economic applications (CT/CS)
3. Construct accurate graphs of functions using the concepts of calculus (EQ/CT/CS)
4. Identify optimum values of functions and apply these values to practical situations, including related rates (EQ/CT/CS)
5. Solve problems involving logarithmic or exponential growth and decay using ideas of calculus (EQ/CT/CS)
6. Find anti-derivatives, both as indefinite integrals and as solutions to simple differential equations (EQ)
7. Use the Fundamental Theorem of Calculus to evaluate definite integrals and solve their applications including average value (EQ/CT/CS)

Attendance Policy: Attendance is expected. Students are responsible for all material and assignments for a missed class. If a student is unable to attend, it is his/her responsibility to contact the professor, and log into CANVAS to obtain any missed assignments. I will take attendance each class—even though attendance is not for a grade. **See the tentative**

course schedule/calendar for all due dates, test dates, ETC. I will follow that schedule. All tests will be given in class. All tests will count including the Final Exam. I do not “drop” a test grade. **Typically, there will be no Make-Up Tests or Labs.** Each written Lab Assignment will be due in class, not via e-mail; the lowest grade given is a zero. ***Once again, attendance is expected of all students.***

Method of Evaluation:

- 0% Homework Grades:** Homework will be done through the Lial / Greenwell / Ritchey, Collin Custom 10th Edition textbook. Students can purchase the textbook separately from the bundles in a bookstore like Half-Priced Books or online via Amazon, etc.
- 0% Attendance Grades:** Attendance will be taken on a daily basis. Please sign in. If you did not sign the attendance sheet, then you will be counted as absent. There is no distinction between “*excused*” and “*unexcused*” absences. If you are late to class, please sign the roll sheet at the end of the lecture. If you need to excuse yourself early due to a prior commitment or appointment, please inform the professor at the beginning of class—it is a sign of respect for your fellow classmates and your professor. In the event of an emergency, please be polite and excuse yourself quietly; as to not disturb your fellow classmates.
- 15% Labs (12 per term 1.25% each):** Lab assignments will be found on CANVAS. They will be handed out in class at the beginning of each unit. In the event that you are absent or you “loose” your Lab Assignment(s), then you are responsible for printing them from CANVAS. Do not attach any extra sheets of paper. Work the Lab Assignments in the spaces provided, **using pencil only.** Points will be deducted for labs done in pen. Late Lab Assignments will not be accepted. *You must show all your work to receive full credit. No exceptions will be granted. There will be no late work accepted. NO EXCEPTIONS.*
- 65% Tests (4 per term 16.25% each):** MISSED EXAMS: MAKEUP TESTS/EXAMS ARE NOT GIVEN. Cheating on an exam will result in a zero on that test or exam. *You must show all your work to receive full credit. No exceptions will be granted.*
- 20% Comprehensive Departmental Final Exam:** **The final exam is mandatory.** If you do not take it, you will receive a zero. If all the regular exams are taken throughout the semester, your final exam grade *can replace the lowest* of your 4 regular exam grades—clearly assuming the final exam grade is higher—therefore counting twice. ***This replacement will not take place on an exam if a student is found guilty of cheating on that exam, or if the student has a zero test grade.***

Final Semester Grade is based on the following:

<u>Percentage</u>	<u>Grade</u>
89.5 – 100	A
79.5 – 89.4	B
69.5 – 79.4	C
59.5 – 69.4	D
0 – 59.4	F

Withdrawal Policy: “See the current Collin Registration Guide for the last day to withdraw.”

Dropping a class means that you remove yourself from the class up to the census date. Dropped classes do not appear on your official transcript. You may now drop online up to the census date. The last date to drop this class is **Tuesday, September 6, 2016.**

Withdrawal from a class means that you remove yourself from the class after the census date. Withdrawn classes appear as a W on your official transcript but are not calculated in your grade point average. Withdrawals are not permitted online. Please read the Fall 2016 Registration guide or contact the admissions office for information on how to withdraw. The last date from this class is **Friday, October 14, 2016.**

Americans with Disabilities Act: Collin College will adhere to all applicable federal, state, and local laws, regulations and guidelines with respect to providing reasonable accommodations as required to afford equal opportunity. It is the student’s responsibility to contact the ACCESS office, CPC-D-118(I) or 972.548.6816 or V/TTD: 972.881.5950 in a timely manner to arrange for appropriate accommodations.

Collin College Academic Policies:

7-2.2 Scholastic Dishonesty (from the 2016-2017 Student Handbook)

Every member of the Collin College community is expected to maintain the highest standards of academic integrity. All work submitted for credit is expected to be the student’s own work. Collin College may initiate disciplinary proceedings against a student accused of scholastic dishonesty. While specific examples are listed below, this is not an exhaustive list and scholastic dishonesty may encompass other conduct, including any conduct through electronic or computerized means. Scholastic dishonesty shall involve, but is not limited to, one or more of the following acts:

General Scholastic Dishonesty includes, but is not limited to, statements, acts, or omissions related to applications for enrollment, credit or class work, research, and/or the award of a degree; falsifying academic records; using annotated texts or teacher’s editions; using information about exams posted on the Internet or other electronic medium; leaving a test site without authority; failing to secure test materials; and/or submitting work that is not one’s own. Students are expected to record honestly and accurately the results of all their research. Falsification of research results shall include misrepresentations, distortions, or omissions in data or reports on research.

Plagiarism is the use of an author’s words or ideas as if they were one’s own without giving credit to the source, including, but not limited to, failure to acknowledge a direct quotation or patch writing. In the preparation of all papers and other written work, students must distinguish their own ideas and knowledge from information derived from other sources. The term “sources” includes not only published primary and secondary materials, but also information and opinions gained directly from other people. Whenever ideas or facts are derived from a source, the source must be indicated by the student.

Cheating is the willful giving or receiving of information in an unauthorized manner during an examination or to complete an assignment; collaborating with another student during an examination without authority; using, buying, selling, soliciting, stealing, or otherwise obtaining course assignments and/or examination questions in advance; unauthorized copying of computer or Internet files; using someone else's work for assignments as if it were one's own; submitting or resubmitting an assignment in whole or in part (i.e. recycling an assignment) for more than one (1) class or institution without permission from each of the professors; or any other dishonest means of attempting to fulfill the requirements of a course.

Collusion is intentionally or unintentionally aiding or attempting to aid another in an act of scholastic dishonesty, including but not limited to, failing to secure academic work; providing a paper or project to another student; providing an inappropriate level of assistance or unauthorized collaboration; communicating answers to a classmate about an examination or any other course assignment; removing tests or answer sheets from a test site; and allowing a classmate to copy answers.

In cases where an incident report has been filed for an alleged violation of scholastic dishonesty, the faculty member is requested to delay posting a grade for the academic work in question until the case is final. Students found responsible for scholastic dishonesty offenses will receive an authorized disciplinary penalty or penalties from the Dean of Student Office. The student may also receive an academic penalty in the course where the scholastic dishonesty took place. The faculty member will determine the appropriate academic penalty.

Students will receive a zero on those assignments where they were found guilty by the Dean of Students for scholastic dishonesty, i.e., cheating, collusion, etc. as stated above; also, for repeated occurrences of these incidences, students will receive a failing grade in this class section. Students are not allowed to submit a late assignment or re-submit any graded assignment (in whole or in part) for a higher grade. There will be no late work or make-up work accepted.

The tentative schedule for MATH 1325-Business Calculus I-Section C03 (Fall 2016) can be found on page 6 of this course syllabus. *I reserve the right to alter this syllabus at any time during the semester upon previous written notice to students.*

Important Dates to Understand:

Census Date (**Tuesday, September 6, 2016**) - If you drop before the census date, you **will not** receive a "W". The course will not appear on your transcript.

Last Withdrawal Date (**Friday, October 14, 2016**) - If you drop after the Census Date but before the Last Withdrawal Date, you **will** receive a "W" on your transcript.

After the Last Withdrawal Date, you CANNOT drop the class. You will receive the grade you earn in the class (A, B, C, D, or F).

Tentative Course Calendar/Fall 2016 Schedule:

Business Calculus I Schedule: Math 1325.C03 - Fall 2016

(*Math 1325 – Lial / Greenwell / Ritchey, 10th ed.*) 16 Weeks -2 day/week class (TR)

Date	Day	Section/Coverage	Written Lab Assignments
8/23	1	Introduction, Syllabus, Graphing Calculator, Textbook & CANVAS	HW: Read the Course Syllabus!!!
8/25	2	3.1 Limits	
8/30	3	3.1 Limits <i>continued</i> 3.2 Continuity	LAB 1 (3.1)— DUE 9/1 in class
9/1	4	3.3 Rates of Change 3.4 Definition of a Derivative	LAB 2 (3.2 & 3.3)— DUE 9/6 in class
9/6	5	3.4 Definition of a Derivative <i>continued</i> 3.5 Graphical Differentiation	LAB 3 (3.4)— DUE 9/8 in class
9/8	6	Test 1 (Chapter 3)	
9/13	7	4.1 Techniques for Finding Derivatives	
9/15	8	4.2 Derivatives of Products and Quotients	LAB 4 (4.1, 4.2, 4.3)— DUE 9/22 in class
9/20	9	4.3 The Chain Rule	
9/22	10	4.4 Derivatives of Exponential Functions 4.5 Derivatives of Logarithmic Functions	LAB 5 (4.4 & 4.5)— DUE 9/29 in class
9/27	11	4.5 Derivatives of Logarithmic Functions <i>continued</i> 6.3 Further Business Applications: Economic Lot Size: Economic Order Quantity; Elasticity of Demand	LAB 6 (6.3 & 12.7)— DUE 10/4 in class
9/29	12	6.3 Elasticity of Demand <i>continued</i> 12.7 L'Hospital's Rule	
10/4	13	Test 2 (Chapter 4 & 6.3 & 12.7)	
10/6	14	5.1 Increasing and Decreasing Functions	
10/11	15	5.2 Relative Extrema	LAB 7 (5.1, 5.2, 5.3)— DUE 10/18 in class
10/13	16	5.3 Higher Derivatives, Concavity, and the Second Derivative Test	
10/18	17	5.4 Curve Sketching	LAB 8 (5.4)— DUE 10/20 in class
10/20	18	6.1 Absolute Extrema 6.2 Applications of Extrema	LAB 9 (6.1 & 6.2)— DUE 10/25 in class
10/25	19	6.4 Implicit Differentiation	
10/27	20	6.5 Related Rates	LAB 10 (6.4, 6.5, 6.6)— DUE 11/3 in class
11/1	21	6.6 Differentials: Linear Approximation & Review	
11/3	22	Test 3 (Chapters 5 & 6)	
11/8	23	7.1 Antiderivatives	
11/10	24	7.2 Substitution	
11/15	25	7.3 Area and the Definite Integral 7.4 The Fundamental Theorem of Calculus	LAB 11 (7.1, 7.2, 7.3)— DUE 11/17 in class
11/17	26	7.4 The Fundamental Theorem of Calculus <i>continued</i> 8.2 Volume and Average Value (Average Value Only)	
11/22	27	10.1 Solutions of Elementary and Separable Differential Equations & Review	LAB 12 (7.4, 8.2, 10.1)— DUE 11/29 in class
11/29	28	Test 4 (Chapter 7 & 8.2 & 10.1)	
12/1	29	Final Exam Review (comprehensive)	
(R) 12/8	30	Final Exam (comprehensive) 2:30 PM – 4:30 PM	LA 238

Additional Instructor Information:

Section 51.907 of the Texas Education Code: A student is limited to **SIX** withdrawals (W's) for their entire college career. This includes any course a transfer student has withdrawn from at another Texas institute of higher education.

Note: **Courtesy and respect for your fellow students and for any teachers, student instructors, or staff you come in contact with is expected. That includes being on time for class, not leaving class early unless it is an emergency, and not talking in class. If you cannot participate positively in class, you will be asked to leave. ALL electronic devices (cell phones, laptops, iPads, tablets and anything else invented during the semester) must be turned off during class.**

Course Requirements: Attend class as scheduled and complete the required outside of class HW, Tests, Lab Assignments, and Comprehensive Final Examination, and any other assignments required by the Professor. Students will be expected to bring textbook, calculator, pencil and paper to class each day and take notes accordingly. **With the exception of a graphing calculator, all electronic devices are expected to be switched off during class, unless an exception is obtained from the Professor in advance. Students are not permitted to leave early without prior permission.** Arrange for appropriate child care when needed—children are not allowed. **Attendance does NOT ensure a passing grade.**

Electronic Devices Policy: As per Section 6.1 Academic Etiquette and the College Experience (pg. 147, paragraph 3) of the *Collin Student Handbook* with the exception of a calculator, all electronic devices are to be switched off during class, unless an exception is obtained from the instructor in advance. All electronic devices (including cell phones, laptop computers, iPods, MP3, etc.) must be turned **OFF** and stored out of sight during class. Students who are using any electronic devices for text message, IM, email, and **etc.** during the class time will be asked to leave the class without returning for the remaining time; considered absent for that class meeting. Students will also be reported to the Dean of Students Office (DOS) at the second offence. If an emergency arises which necessitates the use of a cell phone, the please exit the classroom in an orderly fashion. Please do not disturb the lecture—otherwise every student needs prior approval.

Homework Policy: The homework problems out of the Lial / Greenwell / Ritchey, Collin Custom 10th Edition textbook are expected to be completed after each corresponding lecture and before the next class period. The textbook assignments are not turned in for a grade; however these problems will prepare you for each in-class test. **See page 9 for details.**

Exam Policy: All exams/tests will be given in class during normal lecture hours—observe the tentative course calendar on this syllabus. **BE PRESENT on the class days that TEST/EXAMS are given!** All tests will count including the Final Exam. I do not “drop” a test grade. **Typically, there will be NO Make-Up Tests.** If an emergency arises, please contact your Professor immediately. The Professor reserves the right to refuse a make-up test. A student may request a make-up test to be administered in the campus testing center for documented medical and/or family EMERGENCIES ONLY.

This make-up exam will be administered in the Central Park Campus Testing Center located in room A 109 in McKinney. One example of the use of this policy is: a death in the family--proper documentation is REQUIRED. All instances must be approved by the Professor. This is a privilege—no guarantees. If all the regular exams are taken throughout the semester, your final exam grade can replace the lowest of your 4 regular exam grades—clearly assuming the final exam grade is higher—therefore counting twice. *This replacement will not take place on an exam if a student is found guilty of cheating on that exam, or if the student has a zero test grade.*

Lab Policy: Lab Assignments are opportunities for students to apply the concepts taught in class. They should be meaningful and fulfill the course’s learning outcomes while assessing the core objectives skills of critical thinking, communication skills, and empirical/ quantitative skills. Because we receive funding for four contact hours per student for three hours of class time, the lab assignments must be completed outside of class. Students are expected to see a clear connection between lab assignments and the course outcomes. There are 12 written Lab Assignments per semester; 2 – 4 per unit test. I do not “drop” a Lab grade. The lowest grade given is a zero. **There will be NO Make-Up Labs. There will be no late work accepted. NO EXCEPTIONS.**

Standards for Instructor Response and Availability: The Professor will respond to Student’s e-mails and voicemail messages within 24 – 48 hours. All grades will be posted on CANVAS within 24 – 48 hours of the deadline for each assignment or test day.

Make-Up Policy: Typically, there will be NO Make-Up Tests or Labs allowed.

Additional Math Resources:

I.) Math Lab at all campuses:

Staffed with student tutors, as well as some faculty tutors

Student solution manuals are available.

TI calculators are available for use in the lab.

Private tutor list is available in the Math Lab. You are responsible for contacting any private

tutor and making the arrangements.

Preston Ridge Campus Math Lab F 148 972-377-1639

Spring Creek Campus Math Lab D 203 972-881-5921

Central Park Campus Math Lab C 220 972-548-6896

II.) Access Office (D 118) here at CPC

III.) Library

Calculators can be borrowed for up to 4 hours. Contact Library personnel to confirm.

IV.) Please check your Cougar Mail daily. This is how the college and your professors communicate with you. Please adhere to proper e-mail etiquette. *If you need this defined, please ask.*

Math 1325 Homework Practice Problems

Text: *Calculus with Applications*, by Lial / Greenwell / Ritchey , 10th edition, custom Collin College textbook, Pearson Publishing

Practice problems are automatically assigned after the respective sections are covered in class and should be completed by the next class meeting.

Section	Page	Exercises
3.1	135	#1 – 55 odd, 85
3.2	146	#1 – 25 odd
3.3	158	#1 – 17 odd
3.4	176	#11 – 19 odd, 21 – 25 odd (part b only), 50, 51, 52 (parts a – d only)
3.5	184	#3 – 6 all

4.1	207	#1 – 21 all, 27, 29, 35, 52 – 54 all, 56
4.2	216	#1 – 10 all, 11 – 27 odd, 41, 42, 43
4.3	225	#7 – 13 odd, 21 – 39 odd, 45, 47, 49
4.4	232	#1 – 27 odd
4.5	240	#1 – 31 odd, 35, 56
6.3	329	#25, 26, 29, 30
12.7	659	#1 – 23 odd

5.1	260	#1 – 8 all, 13 – 35 odd,
5.2	271	#13- 33 odd, 46, 47, 52
5.3	283	#1, 3, 5, 17, 19, 27 – 30 all, 59, 60, 72 – 75 all
5.4	294	#3 – 19 odd, 35 – 39 odd
6.1	309	#11 – 19 odd, 25, 31
6.2	318	#1, 7, 8, 9, 15
6.4	334	#1 – 21 odd
6.5	341	#1 – 7 odd, 10, 11, 23, 25
6.6	348	#1 – 11 odd, 18, 19

7.1	366	#1 – 41 odd, 59
7.2	374	#3 – 35 odd
7.3	383	#5 – 12 all
7.4	395	#1 – 39 odd, 55, 56
8.2	440	#24 – 31 all, 34, 35
10.1	535	#1 – 25 odd

Religious Holy Days: In accordance with section 51.911 of the Texas Education Code, the college will allow a student who is absent from class for the observance of a religious holy day to take an examination or complete an assignment scheduled for that day within a reasonable time. A copy of the state rules and procedures regarding holy days and the form for notification of absence from each class under this provision are available from the Admissions and Records Office. Please refer to the current *Collin Student Handbook*.

Student technical support is now provided 24/7 for students at 972.377.1777 or sts@collin.edu

Tutoring Services: All students are expected to study daily for this course. The material you learn “today” will be used “tomorrow”. If you find that you need extra help, please:

- Attend office hours as posted in your syllabus. If my office hours are not conducive to your schedule, then e-mail me specific questions and I will reply within 24 – 48 hours.
- Take advantage of the Math Lab. It is a free tutoring center for math students enrolled at Collin. There are math labs on all three campuses. The CPC math lab is located in the main building room C-220. Call 972-548-6896 for hours.
- Fill out a tutor request form at the ACCESS office in D-118 (CPC). The ACCESS office provides each student with FREE group tutoring or FREE on-line tutoring.
- Form a study group with a few classmates. The best way to learn is to teach one another.

College Repeat Policy: Beginning Fall 2016, Texas residents attempting a course more than twice at Collin College are subject to regular tuition plus an additional \$50 per semester credit hour. Undergraduate courses attempted at Collin with a graded status of A, B, C, D, F, I, W (withdrawals *after* census), and AU will be evaluated for repeat limits. *If you drop this class before census day, it will not count against you.*

Census Date: September 6, 2016
Last Date to Withdraw: October 14, 2016
Thanksgiving Holiday: November 23 – 27, 2016
Final Exam Week: December 5 – 11, 2016