



# Math 1325.083 Business Calculus Online

Course Syllabus: Spring 2021

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*“Northeast Texas Community College exists to provide personal, dynamic learning experiences empowering students to succeed.”*

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Office Hours	Monday	Tuesday	Wednesday	Thursday	Friday	Online
	ONLINE	ONLINE	ONLINE	ONLINE	ONLINE	Email Anytime Zoom Meetings by Appointment

***This syllabus serves as the documentation for all course policies and requirements, assignments, and instructor/student responsibilities.***

*Information relative to the delivery of the content contained in this syllabus is subject to change. Should that happen, the student will be notified.*

**Course Description:** This course is a basic study of limits, continuity, derivatives, techniques and applications of derivatives, optimization and graphing, integrals, techniques and applications of integrals, and multivariate calculus. Applications in business, economics, and social sciences are emphasized. Three hours credit.

**Prerequisite(s):** MATH 1314 or MATH 1324 with a grade of “C” or better

### **Student Learning Outcomes:**

- 1325.1 Apply calculus to solve business, economics, and social sciences problems.
- 1325.2 Apply appropriate differentiation techniques to obtain derivatives of various functions, including logarithmic and exponential functions.
- 1325.3 Solve application problems involving implicit differentiation and related rates.
- 1325.4 Solve optimization problems with emphasis on business and social sciences applications.
- 1325.5 Determine appropriate technique(s) of integration.
- 1325.6 Integrate functions using the method of integration by parts or substitution, as appropriate.
- 1325.7 Solve business, economics, and social sciences application problems using integration techniques.

### **Core Curriculum Purpose and Objectives:**

Through the 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.

Courses in the foundation area of mathematics focus on quantitative literacy in logic, patterns, and relationships. In addition, these courses involve the understanding of key mathematical concepts and the application of appropriate quantitative tools to everyday experience.

## College Student Learning Outcomes:

### Critical Thinking Skills

**CT.1** Students will demonstrate the ability to 1) analyze complex issues, 2) synthesize information, and 3) evaluate the logic, validity, and relevance of data.

### Communication Skills

**CS.1** Students will effectively develop, interpret and express ideas through written communication.

### Empirical and Quantitative Skills

**EQS.1** Students will manipulate numerical data or observable facts by organizing and converting relevant information into mathematical or empirical form

**EQS.2** Students will analyze numerical data or observable facts by processing information with correct calculations, explicit notations, and appropriate technology.

**EQS.3** Students will draw informed conclusions from numerical data or observable facts that are accurate, complete, and relevant to the investigation.

### **Evaluation/Grading Policy**

A series of online Blackboard engagement opportunities including discussion forums, drop-box assignment(s), and online homework problems (Lumen OHM) will be worth 50% of your final grade. A Midterm and Final Exam will contribute to 50% of the final grade, both the Midterm and Final Exams **MUST** be proctored. Remote Proctor Now will be used as an online proctor for this course. Detailed information will be in Blackboard.

Homework via Lumen OHM is graded when submitted. Discussion forums and drop-box assignment(s) are graded within 72 hours **after** the due date. The Midterm and Final Exams are graded when submitted except for completion/SYW problems, these will be grade within 72 hours **after** the due date. A grading rubric for discussion forums is available in the Appendix at the end of the syllabus.

Midterm Exam	25%	“A”	90 – 100 %
Homework/Online Engagement	50%	“B”	80 – 89 %
<u>Final Exam</u>	<u>25%</u>	“C”	70 – 79 %
Total:	100%	“D”	60 – 69 %
		“F”	Below 60 %

Make-up exams will not be given unless the student has coordinated with the instructor prior to the exam. Late work for whatever reason will incur a penalty unless otherwise indicated by the instructor.

### **Required Instructional Materials:**

**Inclusive Access Course:** A discounted textbook fee is added to your student account to cover the cost of the required access code. You will access through Blackboard on the first-class day.

Business Calculus by Calaway, Hoffman, & Lippman textbook will be available free online as a PDF at <http://www.opentextbookstore.com/buscalc/>. You are not required to buy a hardcopy of the textbook; however, research shows that students learn more and retain it longer from using a hardcopy textbook. You may purchase one via NTCC Bookstore or online at [Lulu.com](http://Lulu.com).

**Publisher:** Lulu.com

**ISBN Number:** NA

### **Optional Instructional Materials:**

A print version of the textbook is recommended.

**Minimum Technology Requirements:**

Graphing Calculator is required. TI-83/84 is preferred. A free online TI-83 will be available in Blackboard for PCs.

Below are some technical requirements for using Blackboard that will help your experience in this course.

You will see the NTCC Tech Support email address and phone number below. Please contact them if you run into any technical problems during the semester. Please let your instructor know you are having difficulties as well.

If you need further NTCC technical support services, please contact Austin Baker or Mary Lou Pemberton at:  
abaker@ntcc.edu or 903-434-8279  
mpemberton@ntcc.edu or 903-434-8270

Blackboard will work on both a Mac and a PC. (Chrome Books are known to have issues with Blackboard.) It is best to access Blackboard through Fire-Fox or Chrome as your web browser. If you have trouble with any of the activities working properly, you might change your web browser as your first solution. The Default Browser in Windows 10 is Edge. This browser does not do well with Blackboard! If you will go to Windows Accessories you will find Internet Explorer still on your computer but is not your default browser. If you have any difficulties navigating with Edge, close it and go to Internet Explorer.

To use Remote Proctor Now and/or Zoom you must have access to a computer with high-speed internet, a microphone, a Webcam, and appropriate systems rights to download any necessary software. Please note, the college does not provide this equipment.

You can download Blackboard Student for your smart phone from the Play store or the App store.

More information is available for Technology Requirements and Support under the [Student Resources – Technical Support Tab in Blackboard](#).

**Required Computer Literacy Skills:**

As an online student you will have a much different "classroom" experience than a traditional student. In order to ensure that you are fully prepared for your online courses, following is a list of expectations and requirements: Students in a hybrid and/or on-line program should be comfortable with and possess the following skill sets:

1. Self-discipline
2. Problem solving skills
3. Critical thinking skills
4. Enjoy communication in the written word

As part of your online experience, you can expect to utilize a variety of technology mediums as part of your curriculum:

1. Communicate via email including sending attachments
2. Navigate the World Wide Web using a Web browser such as Internet Explorer
3. Use office applications such as Microsoft Office (or similar) to create documents
4. Be willing to learn how to communicate using a discussion board and upload assignments to a classroom Web site
5. Be comfortable uploading and downloading saved files
6. Have easy access to the Internet
7. Navigate Blackboard, including using the email component within Blackboard. Instructions and tutorials for this are provided in your course.

For more information or technical assistance on using the Learning Management System, please refer to the Home Page, Orientation Module, in the important technical requirement, information and support folder in Blackboard.

**Course Structure and Overview:**

This is a eight-week online course where students are required to access graded activities on the Blackboard Learning Management System. A typical class involves general participation by all members in discussions regarding mathematical principles and procedures being studied. Students are required to complete online homework, discussion forums, as well as drop-box assignments. It is very important students keep up with course materials and assignments since this is a very fast-paced course. Students are expected to watch instructional videos, read course textbook, and complete online assignments located in the Learning Management System, Blackboard, by due dates.

**Communications:**

Emails will be responded to with 24 hours. If you do not receive a response within 24 hours, then the email was not received. Posts in the Discussion Forum “Questions, Comments, and/or Concerns?” will be monitored by the instructor. Responses by the instructor will be within 72 hours of post. Students are expected to abide by Netiquette rules when communicating online. See this link for details: [Netiquette Rules](#).

The college’s official means of communication is via your campus email address. I will use your campus email address and Blackboard to communicate with you outside of class. Make sure you keep your campus email cleaned out and below the limit so you can receive important messages.

**Institutional/Course Policy:**

No late work will be accepted without prior approval by the instructor. Students are always expected to be respectful toward classmates and professor! Review Student Conduct in the Student Handbook. It is the student’s responsibility to check Blackboard for important information/announcements regarding the course. Students should be working on course material via Blackboard every week. Do not wait until the last minute to complete and submit assignments in case of technology issues.

**Alternate Operations During Campus Closure and/or Alternate Course Delivery Requirements:**

In the event of an emergency or announced campus closure due to a natural disaster or pandemic, it may be necessary for Northeast Texas Community College to move to altered operations. During this time, Northeast Texas Community College may opt to continue delivery of instruction through methods that include, but are not limited to, online through the Blackboard Learning Management System, online conferencing, email messaging, and/or an alternate schedule. It is the responsibility of the student to monitor NTCC’s website (<http://www.ntcc.edu/>) for instructions about continuing courses remotely, Blackboard for each class for course-specific communication, and NTCC email for important general information.

Additionally, there may be instances where a course may not be able to be continued in the same delivery format as it originates (face-to-face, fully online, live remote, or hybrid). Should this be the case, every effort will be made to continue instruction in an alternative delivery format. Students will be informed of any changes of this nature through email messaging and/or the Blackboard course site.

**NTCC Academic Honesty/Ethics Statement:**

NTCC upholds the highest standards of academic integrity. The college expects all students to engage in their academic pursuits in an honest manner that is beyond reproach using their intellect and resources designated as allowable by the course instructor. Students are responsible for addressing questions about allowable resources with the course instructor. Academic dishonesty such as cheating, plagiarism, and collusion is unacceptable and may result in disciplinary action. This course will follow the NTCC Academic Honesty and Academic Ethics policies stated in the Student Handbook. Refer to the student handbook for more information on these subjects.

**ADA Statement:**

It is the policy of NTCC to provide reasonable accommodations for qualified individuals who are students with disabilities. This 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 educational opportunity. It is the student’s responsibility to request accommodations. An appointment can be made with the Academic Advisor/Coordinator of Special Populations located in Student Services and can be reached at 903-434-8264. For more information and to obtain a copy of the Request for Accommodations, please refer to the special populations’ page on the NTCC website.

### Family Educational Rights and Privacy Act (FERPA):

The Family Educational Rights and Privacy Act (FERPA) is a federal law that protects the privacy of student education records. The law applies to all schools that receive funds under an applicable program of the U.S. Department of Education. FERPA gives parents certain rights with respect to their children's educational records. These rights transfer to the student when he or she attends a school beyond the high school level. Students to whom the rights have transferred are considered "eligible students." In essence, a parent has no legal right to obtain information concerning the child's college records without the written consent of the student. In compliance with FERPA, information classified as "directory information" may be released to the general public without the written consent of the student unless the student makes a request in writing. Directory information is defined as: the student's name, permanent address and/or local address, telephone listing, dates of attendance, most recent previous education institution attended, other information including major, field of study, degrees, awards received, and participation in officially recognized activities/sports.

**Tentative Course Timeline (\*note\* instructor reserves the right to adjust this timeline at any point in the term):**

#### Math1325.083 Spring 2021 (Subject to Change)

<u>Weeks</u>	<u>Topics</u>	<u>Assignments</u>	<u>Due Dates</u>
Week 1: 3/22/21 – 3/28/21	Orientation	<b>Read through orientation module &amp; complete Syllabus Acknowledgement Agreement.</b>  <b>DF#1 Introduction Discussion Due</b>	<b>4/24/21</b>
	If you are <b>NOT</b> using NTCC's Testing Center or Remote Proctor Now, please submit a Proctor Form for approval.	<b>Submit Proctor Form, if needed. (Only required if you CANNOT test at NTCC's Testing Center or use Remote Proctor Now.)</b>	<b>4/4/21</b>
Week 2: 3/29/21 – 4/4/21	Sections 2.1 – 2.6	Read textbook & watch section videos.	<b>4/4/21</b>
		Work on assigned online Lumen Homework, DF#2: Midterm Discussion Forum, and Economics & Calculus Assignment	<b>4/18/21</b>
Week 3: 4/5/21 – 4/11/21	Sections 2.7 – 2.11	Read textbook & watch section videos.	<b>4/11/21</b>
		Work on assigned online Lumen Homework, DF#2: Midterm Discussion Forum, and Economics & Calculus Assignment	<b>4/18/21</b>
Week 4: 4/12/21 – 4/18/21  <b>Midterm Exam MUST be Proctored.</b>	<b>Midterm Exam Due: 4/18/21</b> Covers Week 1 – Week 4 Midterm Exam will be available 4/9/21 – 4/18/21	Read textbook & watch section videos.	<b>4/18/21</b>
		Complete assigned online Lumen Homework, DF#2: Midterm Discussion Forum, and Economics & Calculus Assignment	<b>4/18/21</b>
Week 5: 4/19/21 – 4/25/21	Sections 3.1 – 3.4	Read textbook & watch section videos.	<b>4/25/21</b>
		Work on assigned online Lumen Homework.	<b>5/13/21</b>
Week: 6: 4/26/21 – 5/2/21	Sections 3.5 – 3.8	Read textbook & watch section videos.	<b>5/2/21</b>

		Work on assigned online Lumen Homework, DF#3: Final Discussion Forum, and Tax Rates & Calculus Assignment	<b>5/13/21</b>
Week 7: 5/3/21 – 5/9/21	Sections 4.1 – 4.3	Work on assigned online Lumen Homework. DF#3: Final Discussion Forum, and Tax Rates & Calculus Assignment	<b>5/13/21</b>
Week 8: 5/10/21 – 5/13/21  <b>Final Exam MUST be Proctored.</b>	<b>Final Exam Week</b> <b>Final Exam Due: 5/13/21</b> Covers Week 5 - Week 8. Final Exam will be available 5/7/21 – 5/13/21	<b>Complete all</b> assigned online Lumen Homework, DF#3: Final Discussion Forum, and Tax Rates & Calculus Assignment	<b>5/13/21</b>

**Discussion Forum Math Rubric:**

9 – 10: The student completes all important components of the task and communicates ideas clearly.

The student demonstrates in-depth understanding of the relevant concepts and/or processes. Where appropriate, the student chooses more efficient and/or sophisticated processes. Where appropriate, the student offers insightful interpretations or extensions (generalizations, applications, analogies).

7 – 8: The student completes most important components of the task and communicates clearly. The student demonstrates understanding of major concepts even though she/he overlooks or misunderstands some less important ideas or details.

5 – 6: The student completes some important components of the task and communicates those clearly. The student demonstrates that there are gaps in his/her conceptual understanding.

3 – 4: Student shows minimal understanding. Student unable to generate strategy or answer may display only recall effect. Answer lacks clear communication.

1 – 2: Answer may be totally incorrect or irrelevant.

0: Blank/no response