Course Title and Course Number:MATH 1021 – lab class meetings of MATH 1020, Business Calculus I

Term: Fall 2023

Course Coordinator: Mrs. Donna M. Simms, [dsimms@clemson.edu](mailto:dsimms@clemson.edu), (864)-656-5210, Martin Hall O-311

Information on Modality:Lectures will primarily be delivered asynchronously through pre-recorded videos produced by Clemson University instructors specifically for students enrolled in this course. Video links will be provided in Canvas. Question/answer sessions and/or supplementary instruction will take place at the beginning of the corresponding lab. Lab class sessions will be in person.

Section: 009

Class Meeting Time and Place: We will meet on MWF from 11:15 AM – 12:05 PM in Martin Hall M301. On exam day, we will meet on W from 5:30 PM – 7:00 PM in a room to be decided.

Instructor Name:Michael Nelson

Department and College of Instructor**:** School of Mathematical & Statistical Sciences (SMSS), College of Science

Time to Wait: If an instructor does not show up for lab class meeting, quietly wait 15 minutes before leaving. Please call (864)-656-3434 to report this should it happen.

Instructor Email: My email is [mnelso7@clemson.edu](mailto:mnelso7@clemson.edu). You can expect a response to your email inquiries within 24 hours, excluding weekends and university holidays.

University Office Phone:My office does not have a phone.

Office Address/Office Number:Long Hall B06

Office Hours: I’ll be in my office on MWF from 10:00 AM – 11:00 AM. If you prefer to meet at some other time during the week, please let me know.

Communication: My main form of communication will be through announcements in Canvas, so be sure to watch for that. I will also communicate relevant information in class as well.

Course Description: **Intuitive approach to the concepts and applications of calculus. Topics include functions and graphing, differentiation, and integration. Applications from social, biological, and management sciences are presented. Not open to students who have received credit for**[**MATH 1060**](https://catalog.clemson.edu/search_advanced.php?cur_cat_oid=33&search_database=Search&search_db=Search&cpage=1&ecpage=1&ppage=1&spage=1&tpage=1&location=33&filter%5Bkeyword%5D=MATH+1020#tt7472)**. Preq: Any MATH or STAT course, or a score of 620 or higher on the SAT Math section, or a score of 26 or higher on the ACT Math section, or a score of 60 or higher on the Clemson Mathematics Placement Test (CMPT).**

## Course Objectives:

* To develop a conceptual understanding of basic calculus concepts through the study of rates of change and the interpretation of rates of change in non-technical settings using a data-driven approach.
* To model discrete data as continuous functions and understand mathematical connections.

## Learning Outcomes: **Upon successful completion of this course, a student will be able to**

* Evaluate functions and solve equations with the aid of a course-approved calculator.
* Mathematically describe the behavior of functions.
* Apply business terms: profit, revenue, cost, average cost, or the break-even point.
* Find and interpret marginal revenue and cost, given a revenue or cost function.
* Use compound interest formulas to find present value, future value, and doubling time.
* Develop a completely defined model from a data set. Use the model for extrapolation and interpolation and finding rates of change.
* Find change, average rate of change and/or percentage change from a function represented verbally, graphically, numerically, or algebraically.
* Find and interpret the slope of a tangent line to a function graph.
* Find and interpret derivatives for a large class of functions, including polynomial, exponential, logarithmic, and logistic functions, and their sums, products, and compositions.
* Use derivatives to optimize a function and interpret that value.
* Sketch first and second derivative graphs.
* Determine a function graph from its derivative graph.
* GENERAL EDUCATION STUDENT LEARNING OUTCOMES: Mathematics  
  Students will demonstrate mathematical literacy through interpretation of mathematical forms and performing calculations. - Problems that require mathematical literacy can be found in section work, WebAssign assignments, and tests: finding a mathematical model for discrete data; using a model to extrapolate or interpolate, with interpretation; finding and interpreting various types of rates of change; using a derivative to optimize a function, with interpretation; finding and interpreting marginal revenue or cost.

Required Materials:

* **WebAssign Access** associated with Calculus Concepts: An Informal Approach to the Mathematics of Change 5th edition, by LaTorre, Kenelly, Fetta, Carpenter, and Biggers. The textbook is included as an eBook in the WebAssign online homework system. (Use same WebAssign access code in Math 2070.)
* **Lecture and Note-taking Guide** to Accompany Calculus Concepts 13th edition (2019-2020), by Biggers, Davidson, Hanna, and McKnew. (Text will be used next semester in Math 2070.)
* Course-approved **Calculator**: TI-84 Plus (or SE, or CSE, or CE), TI-84, or TI-83 (or Plus or Plus SE). The calculator will be used extensively in this course, both in lab and on assignments, quizzes, and exams. (NOT permitted are: TI-Inspire, TI-89, TI-92 and similar calculators with symbolic algebra systems.)
* **Laptop** with LockDown Browser downloaded (see instructions for free download on Math 1020 Course website). Some student may also be required to use Respondus Monitor with integrated or separate webcam (and a handheld mirror). Students with Chromebooks (and possibly Lenovo) laptops may have issues that need to be resolved by immediately contacting CCIT at [ithelp@clemson.edu](mailto:ithelp@clemson.edu). You will need audio capabilities for listening to recorded lectures, audio comments on assignments, and attending online office hours.
* **Pencil & Paper. All assignments will be submitted online, but students will need paper for working problems during lab and during exams. Students will be asked to scan and upload written work.**
* Access to **high-speed internet** connection. If you need help, contact CCIT at [ithelp@clemson.edu](mailto:ithelp@clemson.edu).
* Ability to **print** learning activities, HW, etc. as directed by section instructor.

Learning Environment: Lab class time will be devoted to active learning through group discussion and the completion of various assignments. You are expected to prepare in advance for each lab by watching the assigned lecture videos and taking notes in your *Lecture and Note-Taking Guide*. Links to the videos are available in your Canvas course.

### Student role:

* Watch the lecture videos and take thorough notes in your Lecture Guide prior to lab.
* Submit the corresponding Readiness Assessment prior to lab.
* Have your Lecture Guide, calculator, laptop, and pencil & paper with you during every lab class meeting.
* Attend lab class regularly.
* Participate fully in the learning activities with your lab partners. Each student will submit their own assignment, but you are encouraged to discuss problem solving strategies and methods as you work these.
* Treat others with respect and don’t engage in behaviors that interfere with learning or the safety of others.
* Ask questions and seek help from your peers, PAL leader, instructor, and/or TA as needed.
* Stay engaged and working on math for the entire lab class period. Once the learning activity is submitted, begin working in WebAssign.

### instructor role:

* Provide detailed instructional materials (lecture videos) corresponding to each topic.
* Briefly summarize the lectures and provide a question/answer opportunity at the beginning of each lab class.
* Provide a non-threatening lab class environment that encourages discussion and collaborative learning.
* Provide regular assessments and feedback to aid in the learning process.

### Grading Policies:

### Your MATH 1021 lab average accounts for 28% of your MATH 1020 course grade. The lab assignments will fall into four categories (Readiness Assessments, Attendance Checks, Section Work and WebAssign) as described below.

**Readiness Assessments - 5% of the MATH 1020 course grade (17.857% of lab average)**:

• Readiness assessments are designed to keep students accountable for watching the lectures and taking good notes prior to each lab.

• They may be in the form of a lecture check or a short open notes quiz (online).

• It is required that you take your notes in the L&NTG. Doing so will make the learning activity time and review time more understandable. Credit will not be given for notes on notebook paper - you need to use a L&NTG so that you will have definitions, graphics, and examples all in one place when reviewing.

• Because lecture checks are open in advance of lab class time, they are not accepted late. If you need to be excused from submitting your lecture check (due to illness, conflict, internet issues, technology issues, etc.), contact your course instructor no later than 5:00 pm on the due date with explanation and/or documentation – your course instructor will determine if the lecture check is to be excused. Being excused from submitting a lecture check should be very rare.

• The three lowest Readiness Assessment grades will be dropped before the final course grade is computed. Readiness Assessment averages will NOT be allowed to exceed 100.

**Attendance Checks - 2% of the MATH 1020 course grade (7.143% of the lab average)**:

• Class attendance to the lab component of this course is critical to the educational process.

• Attendance will be taken as a graded assignment at each lab class meeting except the lab class meetings on test days (9/20, 10/25, 11/29) and the last review days of the semester (12/6, 12/8).

• Students are expected to come to lab prepared, in possession of all required materials, having watched the required lecture videos, and having completed required assignments beforehand. You are responsible for all notes, assignments and announcements made during lab time.

• Attendance checks may be in the form of canvas quiz (online), that the student can only receive the password to open by being in the lab classroom, or the instructor may enter attendance into Canvas directly.

• Students are expected to be regular and punctual. Each attendance check assignment will be worth 3 points. The grade will be 0/3 for students not attending lab class meeting. Your course instructor may assign 1/3 or 2/3 scores due to tardiness or if you leave before your instructor has dismissed the course meeting.

• Attendance checks will be based on being in the lab classroom. There will not be a determination of excused or unexcused absences with the following exceptions:

* Attendance checks may be excused for required travel for university classes or university organizations. These excuses require documentation to the instructor in advance of the absence.
* Attendance checks may be excused with medical documentation that requires three or more consecutive lab class meeting absences.

• The six lowest attendance check grades will be dropped before the final course grade is computed.

* Six missed attendance checks is the equivalent of two full weeks of lab class meetings.
* Students with excessive absences (3 or more consecutive lab class meetings OR more than 6 lab class meetings) might be withdrawn at the discretion of the instructor at any time.
* Attendance check averages will NOT be allowed to exceed 100.

• You are responsible for contacting their instructor within one week of the end of each unit (by 9/27, 11/1 and 12/6) if you feel there are errors in attendance recording.

**Section Work - 11% of the MATH 1020 course grade (39.286% of the lab average)**:

• A grade in this category reflects student performance on in-lab learning activities, quizzes, and homework assignments that are not a part of Web Assign. These are assignments chosen by the instructor to promote active learning through group discussion, problem solving, and interpreting various mathematical forms.

• “paper” learning activities are available in Canvas in advance of lab class meetings. You will need to print the “paper” learning activity and bring it to lab class meeting each day needed OR download the learning activity to a tablet and bring the tablet to lab class meeting each day needed.

• There are some days when the Learning Activity will be in Canvas Quizzes – on those days you must have your computer in lab class meeting with you.

• The latest a LA can be turned in is 10 pm the night of lab class meeting - see 1020/1021 Assignment Calendar.

• Generally, each LA will be graded out of 20 points for completeness and the impression of correctness in learning activity problems. Neatness, notation, and/or accuracy may be considered in the score.

• Contact your instructor immediately if you are unable to attend a lab class meeting and therefore miss a section work assignment and feel you are eligible for an extension.

• Because due dates are the last time you should be turning in a learning activity, not when you should be actively working on it, late work should not be an issue. However, if you have an extended illness or some other event that would be considered “excused”, contact me no later than 5:00 pm the day the item is due to discuss whether an extension is possible. Any late work that is allowed for the section work average must be submitted no later than the administration of the associated unit test.

• Except for extreme extenuating circumstance, LA are not accepted late or by e-mail. The due date is the last time a LA can be turned in (not when you should be doing most of the work on it.) The links to turn in assignments shut down automatically based on the server time. Do not wait to the last minute or you might not be able to get the assignment uploaded.

• Any late work that your course instructor has allowed must be submitted by the time you take a unit test.

• Some number (TBD) of lowest scores in the section work grades will be dropped at the end of the semester. Section Work averages will NOT be allowed to exceed 100.

**WebAssign - 10% of the MATH 1020 course grade (35.714% of the lab average)**:

• WebAssign is an online homework system that assigns problems directly from the *Calculus Concepts* textbook. WebAssign assignments are accessed directly via the Assignments Module in your Canvas course, and there is NO Class Key. Refer to the Math 1020 Course Website for *Purchase Options* and *Login Instructions for Web Assign*.

• These assignments are common to all course sections, regardless of instructor, but the answers will vary with each student’s particular randomization.

• To what extent possible, WA assignments should be started during lab class, after the completion of the corresponding section work assignments. To allow for variability in the pace at which students work, however, any portion that you are unable to complete during lab class should be completed for homework.

• Registration assistance is available, via the zoom link[https://cp.cengage.com/OfficeHours\_East](https://urldefense.com/v3/__https:/cp.cengage.com/OfficeHours_East__;!!PTd7Sdtyuw!TkaOCm60eYVD8A5z2esvXhHZS-xkBRJ651OZbtWAhTZ_C7CgVH5f-ExjyB6Fn2pG771fWLOOn5yqQv9MAJ__omidvA$), from 1-3 pm EST each week day between August 14th and September 22nd (except Sept. 4th). This is your opportunity to receive technical assistance with registration in a timely manner at the start of the semester, so take advantage of it!

• Extensions will not be granted for failure to register on time, nor for late arrival of books ordered too late. The first WA assignment is due August 30th.

• You have ***free* access** to WebAssign during a **two-week** trial period, after which you **must purchase** WebAssign Access (unless you already have access code for this textbook).

• Specific due dates for each assignment are listed both on the Course Calendar and in Canvas. The working WA average will be calculated by dividing the total number of points earned by the total number of points possible. The point value of each assignment vary.

• The three lowest WebAssign grades will be dropped (using the Canvas gradebook drop feature) before the final course grade is computed.

* Except for very extreme extenuating circumstances with approval from Mrs. Simms (the course coordinator), WA extensions will **not** be granted.
* WA extensions will not be granted for computer issues, travel issues, or one day illnesses – start your WA assignments in advance.
* If Mrs. Simms allows a WA extension for very extreme extenuating circumstances, the due date will determined based on the circumstances with the note that WA assignments must be completed by the time the students takes the unit test.
* WebAssign averages will NOT be allowed to exceed 100.

## Inclement Weather and other special circumstances:

* In the case of inclement weather, check Canvas and/or your Clemson email address for communication from your instructor.
* If an assignment is due at the time of a class cancellation due to inclement weather (or any university

cancellation), it will be automatically be due at the next lab class meeting, unless contacted by your instructor via email or Canvas within 24 hours of the cancellation. In the event of the university closing during a scheduled test, students will be notified by their instructor as to the date of the rescheduled exam.

* Students absent due to an emergency should make direct contact with their course instructor, preferably before a missed lab class or exam. Students with a scheduled absence or a University sanctioned activity (athletic travel, field trip, etc.) should provide documentation to their instructor in advance of the absence.
  + The student will continue the coursework in an asynchronous manner.
  + See the course policies above concerning due date policies and possible extreme circumstances exceptions that apply to readiness assessments, attendance checks, and section work assignments.
  + Because the assignments are entirely online and open in advance, the student should keep up with their WebAssign assignments while away.
* Students who test positive for COVID-19 or other contagious illnesses, or have been asked to quarantine/isolate due to exposure to illness, and/or students experiences other illnesses keeping them from attending in-person lab class:
  + must inform you instructor, via the Notification of Absence module in Canvas.
  + The student will continue the coursework in an asynchronous manner.
  + See the course policies above concerning due date policies and possible extreme circumstances exceptions that apply to readiness assessments, attendance checks, and section work assignments.
  + Because the assignments are entirely online and open in advance, the student should keep up with their WebAssign assignments while quarantined/ill.
  + Please follow up with your instructor by email (not just sending Notification of Absence) to develop a continued plan of study.
  + If you are not well enough to continue the coursework while quarantined/ill, it is imperative to contact your instructor within a reasonable time period to determine a plan for getting caught up in the course.

### Notification of Absence:

### The Notification of Absence module in Canvas allows students to quickly notify instructors (via an email) of an absence from class and provides for the following categories: court attendance, death of immediate family member, illness, illness of family member, injury, military duty, religious observance, scheduled surgery, university function, unscheduled hospitalization, other anticipated absence, or other unanticipated absence. The notification form requires a brief explanation, dates and times. Based on the dates and times indicated, instructors are automatically selected, but students may decide which instructors will receive the notification. This does not serve as an “excuse” from class. It is a request for an excused absence and students are encouraged to discuss the absence with instructors, as the instructor is the only person who can excuse an absence. If students are unable to report the absence by computer, they may reach the Office of Advocacy and Success via 864.656.0935. Students with excessive absences who need academic or medical assistance can also contact the Office of Advocacy and Success.

### Instructor Absence:

If an instructor is required to quarantine, then that instructor’s section(s) will likely convert to an online only format until the instructor is cleared to return.

* If the instructor is well enough to conduct the lab class meeting, then the section(s) will likely meet in a synchronous manner (with Zoom).
* If the instructor is not well enough to conduct the lab class meeting, then the section(s) will likely meet in an asynchronous manner. Details about expectations during this time will come from the instructor (or a designee) through e-mail and/or Canvas announcements.
  + If this continues beyond three lab class meetings, every effort will be made for an alternate instructor to temporarily substitute and return the lab class to a synchronous format, be it in-person or online.
* Students should pay close attention to communications from the instructor or a designee during this time.

### Note: [required]

This document is a supplement to the SMSS MATH 1020 Course Policies document and SMSS MATH 1020 Course Calendar found at <https://mthsc.clemson.edu/ug_course_pages/view_course_page.py?course_id=2> . In the case of any conflicts with the SMSS MATH 1020 Course Policies document, the SMSS MATH 1020 Course Policies document supersede this document.