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**Instructor**: Dr. Chris Lee[clee@roanoke.edu](mailto:clee@roanoke.edu) Trexler 270D

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# Office Hours: Have a question? Please stop by my office to chat. Regular office hours are listed below, and I welcome you to contact me to make an appointment outside of these hours:

# Mon: 3:30-4:15 pm, Tue: 1:00-2:00 pm, Wed: 3:30-4:15 pm.

**Course Description**: This course provides an introduction to Calculus, including the study of limits, derivatives, graphing, and beginning integration. A focus of the course will be the use of technology as a tool and learning aid.

**Intended Learning Outcomes:** By the end of this course, students will be able to:

* apply techniques of differentiation and integration to model and solve problems.
* understand the role of Calculus and the infinitesimal in modern mathematics.
* understand the concepts behind limits, derivatives, and integrals.
* recognize the role of technology in Calculus, understand when it should be used, and be aware of its limitations.

**Required Text:** Calculus: Early Transcendental Functions; Smith and Minton, 4th Edition

**Technology:** Laptop running Mathematica recommended.

**Attendance**: Come to class and be prepared to participate actively - this is the best way for you to engage in the learning material, and it makes our class meeting so much more fun! You should attend every class, but extenuating circumstances can arise that may make it challenging. If you cannot attend a class, please let me know. If circumstances cause you to miss more than 3 classes during the semester, you may be overextended and should consider dropping the class.

**Late & Missed Work:** Unfortunately, illnesses, death in the family, or other traumatic events are part of life. Such events are unwelcome, and because I understand how difficult these times are, if you contact me **prior** to the absence, I will be happy to extend deadlines and/or provide make-up work. Please note that you must let me know in advance of an absence for any late work to be accepted.

**Reading and Participation:** Participation is key to learning. We will strive to have an active, rather than passive, classroom environment. On Inquire is a day-by-day outline of the chapters that will be discussed in class. I fully hope that you will have read the upcoming chapter before the class meeting. You most certainly will not understand everything while you are reading ahead, but having read the section will allow you to ask questions and follow along better in class.

**Expected Hours of Work:** To be successful in this course, it is anticipated that you will put in at least 12 hours of work inside and outside of class each week.

**Academic Integrity**: Students are expected to follow the integrity policy detailed in the handbook, *Academic Integrity at Roanoke College*.  Additionally, if you are ever uncertain as to how the College’s policy pertains to any assignment or exam in this course, please ask me for clarification.  The bottom line is that all work that a student submits for a grade must be ***solely*** the work of that student unless the instructor has given explicit permission for students to work together.

**Retrieval Practice:** A clear and most important goal of this course is to give you exposure to and understanding of basic statistical methods - the ability to use this information to make good choices, engage in thoughtful discussions, and determine the validity of information and arguments. There is a significant difference between the intake of course information and the retrieval of such information. And, as shown by study after study, if you wish to be able to retrieve information, you must PRACTICE retrieving information. To aid in this retrieval practice, there are a variety of assessment activities throughout the term, aiming for higher frequency with less weight on any particular event. You will have multiple quizzes and tests throughout the semester.

**Everything is Cumulative**: You will find that virtually every day in class, we will be combining information from previous chapters with material we are currently studying, and this pattern will carry over to all your graded work. I am committed to helping you develop a comprehensive understanding this semester and to giving you frequent opportunities to practice retrieving this knowledge. To that end, all quizzes, tests, and the final exam are cumulative. On any one of these, approximately 30% of the assessment will be on fundamentals of previous material and 70% on new material.

**Grading Components**: There will be some graded activity virtually every day, such as collected homework or a quiz.

**Homework**: I will assign HW problems at the end of each class period; these will be due at the start of the next class period unless there is a quiz that day. The homework you turn in should be neat and organized, and allow me to understand how you are doing with the material at the moment. We will be discussing the HW problems in class when they are collected, so late HW is never accepted.

**Quizzes:** Weekly quizzes will simulate a testing environment, allowing you to experience working on blank paper under a time constraint. You do not have to “study” for them if you have completed all HW during the week.

**Tests:** Our tests will be traditional in-class, closed-book experiences. The week leading up to a test is a great time to take advantage of office hours to help organize your preparation.

**Course Grade:** Components of a student’s grade will be weighted as follows:

Tests: 60% Final Exam: 15% Homework & Quizzes: 25%

A scale for final grades will not be lower than the scale given below.

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| *0* |  | *60* |  | *63* |  | *67* |  | *70* |  | *73* |  | *77* |  | *80* |  | *83* |  | *87* |  | *90* |  | *93* |  |
|  | *F* |  | *D-* |  | *D* |  | *D+* |  | *C-* |  | *C* |  | *C+* |  | *B-* |  | *B* |  | *B+* |  | *A-* |  | *A* |