MAC 2233
SPRING 2026

SYLLABUS

COURSE TITLE: Survey of Calculus 1

CATALOG DESCRIPTION: Geometric and heuristic approach to calculus; differentiation and integration of simple algebraic and exponential functions; applications to graphing, marginal analysis, optimization, areas and volumes.

COURSE DESCRIPTION: MAC 2233 is the first in the two-semester sequence, MAC 2233 and MAC 2234, surveying the important ideas of calculus but emphasizing its applications to business, economics, life, and social sciences. The course covers important precalculus topics: basics of functions and graphing and their applications as models (linear, quadratic, rational, exponential, and logarithmic), as well as calculus topics: limits, differentiation and applications of the derivative, introduction to integration and its applications including area (volume is not covered). This course does not cover trigonometry.

In SPRING 2026, you are assigned to the following course meeting time:
MAC 2233 0117 (17136) SURVEY OF CALC 1 MWF 3 CSE A101

INSTRUCTOR: **Dr. Larissa Williamson**
Office: LIT 380
Office Hours: in-person: M5, W5, F5
or by Appointment (via Zoom or in-person)
E-mail: lwill@ufl.edu
Webpage: https://people.clas.ufl.edu/lwill/

TEACHING ASSISTANT: **Valentino Vito**
Office: LIT 413
Office Hours: via Zoom: R6, R7
in-person: T8
or by Appointment (via Zoom or in-person)
E-mail: v.vito@ufl.edu
Webpage: https://people.clas.ufl.edu/valentino-vito/

Request for an Office Hour by Appointment must be sent at least 48 hours in advance.

The Course Management System is E-Learning (Canvas): https://elearning.ufl.edu/

E-MAIL: The **instructor** will communicate with the students and reply to **all** email messages received from the students ONLY via Canvas **Inbox** tool.

PREREQUISITES: Any of the following minimal acceptable scores on the online mathematics placement exam, a minimum grade of C in a MAC course numbered 1140 or higher; AP credit on MAC 2311; IB credit for a MAC course numbered 1140 or higher.
MAC 2233 assumes that the students have essential precalculus skills necessary to succeed in calculus, so we will review the most important topics of precalculus at the beginning of the term - the students who are having difficulty with the precalculus material are strongly recommended to take MAC 1140, a 3-credit review of Precalculus Algebra, instead of MAC 2233.
Note: you may adjust your class schedule on ONE.UF only during the drop-add week.

General Education Credit

- **Mathematics**

This course accomplishes the General Education Objectives of the subject area listed above. **A minimum grade of C is required for General Education credit**. Courses intended to satisfy General Education requirements cannot be taken S-U.
At the end of the course, the students are expected to have achieved the General Education Student Learning Outcomes (SLOs), which are listed on the last pages of this syllabus.

Delivering Content

TEXTBOOK & ACCESS CODE: We use the following textbook in this course:

Calculus with Applications, 12th edition,
by Margaret L. Lial, Raymond N. Greenwell, Nathan P. Ritchey*

Access code to **MyLab and Mastering** is required in the course. **Access code can be obtained through UF All Access program by authorizing charges to your student financials account and is provided at a reduced price.**** This option will become available starting one week prior to the beginning of the semester. If you do not wish to authorize charges to your student financials account, you may purchase access code at the Campus bookstore instead (https://www.bkstr.com/floridastore), which will be more expensive than opting-in.
* Registration with MyLab gives you access to an electronic version of the textbook. If you wish to have a printed text, you may purchase it at the bookstore.
****See Course Tools & Technology → Course Materials & Registration Instructions on E-Learning (Canvas) for the information on obtaining access code through UF All Access and registration with Pearson's MyLab and Mastering.**

LECTURE NOTES: Lectures in this course are delivered using Lecture Notes shells, which can be printed from each individual Module on Canvas or from the Canvas page Lecture Notes. The Lecture Notes shells make note taking easier and are recommended in the course. The whole set of Lecture Notes (Course Packet) will be available for purchase at the beginning of the term at Target Copy (1412 W University Ave, Gainesville, FL 32603, http://target-copy.com/).

TEXTBOOK READINGS: Reading the textbook is a part of the learning process. The students are recommended to read the corresponding sections of the textbook after (or before) a lecture and before doing homework on MyLab (see LECTURES and ONLINE HOMEWORK in this Syllabus). The pages of the textbook matching the content of the lectures are listed in Canvas Modules.
Course materials are divided into **5 Units** with 36 conceptual Modules, M01-M36 (see below).

Unit 1: Review of Algebra

Goal: Review the most important topics in algebra.

M 01	Polynomials & Factoring (Sect. R1, R2)
M 02	Polynomial Division & Rational Expressions (Sect. R3)
M 03	Equations: Linear, Quadratic, and Rational (Sect. R4)
M 04	Inequalities: Linear, Quadratic, and Rational (Sect. R5)
M 05	Exponents & Radical (Sect. R6, R7)

Unit 2: Functions & Mathematical Models

Goal: Learn to work with the functions and mathematical models.

M 06	Slopes & Equations of Lines (Sect. 1.1)
M 07	Linear Functions & Applications; The Least Squares Line (Sect. 1.2, 1.3)
M 08	Properties of Functions (Sect. 2.1)
M 09	Transformations of Graphs & Quadratic Functions (Sect. 2.2)
M 10	Polynomial and Rational Functions (Sect. 2.3)
M 11	Exponential Functions (Sect. 2.4)
M 12	Logarithmic Functions (Sect. 2.5)
M 13	Applications: Growth & Decay; Math in Finance (Sect. 2.6)

Unit 3: Limits & Derivatives

Goal: Learn concepts of the Limit and Derivative and use them in applications.

M 14	Limits (Sect. 3.1)
M 15	Continuity (Sect. 3.2)
M 16	Rates of Change & Tangent Line (Sect. 3.3, 3.4)
M 17	Definition of the Derivative & Graphical Differentiation (Sect. 3.4, 3.5)
M 18	Techniques of Differentiation (Sect. 4.1)
M 19	Derivatives of Product and Quotient (Sect. 4.2)
M 20	The Chain Rule (Sect. 4.3)
M 21	Derivatives of Exponential Functions (Sect. 4.4)
M 22	Derivatives of Logarithmic Functions (Sect. 4.5)

Unit 4: Derivatives & Applications

Goal: Apply the Derivatives to investigate properties of functions

M 23	Increasing and Decreasing Functions (Sect. 5.1)
M 24	Relative Extrema (Sect. 5.2)
M 25	Higher Derivatives, Concavity, Second Derivative Test (Sect. 5.3)
M 26	Curve Sketching (Sect. 5.4)
M 27	Absolute Extrema & Applications (Sect. 6.1, 6.2)
M 28	Business Applications of Extrema (Sect. 6.2, 6.3)
M 29	Implicit Differentiation, Related Rates (Sect. 6.4, 6.5)
M 30	Differentials: Linear Approximation (Sect. 6.6)

Unit 5: Integration & Applications

Goal: Learn techniques of integration and use them in applications

M 31	Antiderivatives (Sect. 7.1)
M 32	Method of Substitution (Sect. 7.2)
M 33	Area & Definite Integral (Sect. 7.3)
M 34	The Fundamental Theorem of Calculus (Sect. 7.4)
M 35	The Area between Two Curves (Sect.7.5)
M 36	Numerical Integration (Sect. 7.6)

Course Calendar

Spring 2026	Monday	Tuesday	Wednesday	Thursday	Friday
January	12 M1 L	13	14 M2 L	15	16 M3 L
	19 Holiday	20	21 M4 L	22 HW M01-M03 due	23 M5 L **Syllabus Quiz**
	26 M6 L	27 **Project0 due**	28 M7 L	29 HW M04-M06 due	30 M8 L **Quiz-Unit1: M1-M5**
February	2 M9 L	3	4 M10 L	5 HW M07-M09 due	6 M11 L
	9 M12 L	10	11 M13 L	12 HW M10-M12 due	13 Review2 L
	16 M14 L	17	18 M15 L	19 HW M13-M14 due **Exam1: M6-M13**	20 M16 L
	23 M17 L	24	25 M18 L	26 HW M15-M17 due	27 M19 L
March	2 M20 L	3	4 M21 L	5 HW M18-M20 due	6 M22 L
	9 Review3 L	10 HW M21-22 due **Exam2: M14-22**	11 M23 L	12	13 M24 L
	S P R I N G B R E A K: M A R C H 14 – 22				
	23 M25 L	24	25 M26 L	26 HW M23-M25 due	27 M27 L
April	30 M28 L	31	1 M29 L	2 HW M26-M28 due	3 M30 L
	6 Review4 L	7 HW M29-30 due **Exam3: M23-30**	8 M31 L	9	10 M32 L
	13 M33 L **Make-up**	14	15 M34 L **Project1 due**	16 HW M31-M33 due	17 M35 L
	20 M36 L	21	22 Review5 L HW M34-36 due **Quiz-Unit5: M31-M36**	23 Reading Day	24 Reading Day

The Final Exam will be given on Saturday, April 25, from 12:30 pm – 2:00 pm

Recommended Textbook Readings and Exercises

Module #	Textbook Pages	Textbook Exercises (ungraded)
M 01	Section R.1: Pages R-2 – R-5 Section R2: Pages R-6 – R-8	Section R.1 (1 – 27 (odd)) Section R.2 (1 – 31 (odd))
M 02	Section R.3: Pages R-9 – R-11.	Section R.3 (1 – 21 (odd), 37, 38)
M 03	Section R.4: Pages R-12-R-17	Section R.4 (5, 7, 9, 17, 23, 27, 29, 33, 37)
M 04	Section R.5: Pages R-18-R-21	Section R.4 (1-6, 7-13 (odd), 15, 19-25 (odd), 31, 33, 39, 43, 47, 51, 53)
M 05	Sections R.6: Pages R-22-R-26 Section R.7: Pages R-27- R-30	Section R.6 (5, 7, 13, 19, 23, 25, 29, 31, 33, 41. 49. 55 (odd)) Section R.7 (7 – 11 (odd), 19 – 41 (odd))
M 06	Section 1.1: Pages 2 – 13	Section 1.1 (5 – 31 (odd), 53, 57, 65, 68)
M 07	Section 1.2: Pages 17 – 24 Section 1.3: Pages 27 – 33	Section 1.2 (11-17 (odd), 23-29(odd), 31, 35, 37, 43), Section 1.3 (7, 9, 15, 17)
M 08	Section 2.1: Pages 49 – 58	Section 2.1 (5-11 (odd), 25, 31, 35, 37, 41, 49, 55 – 59 (odd), 61, 63, 71, 73, 77, 79, 85)
M 09	Section 2.2: Pages 63 – 71	Section 2.2 (5-12, 17, 19, 35-41(odd), 53, 57, 61, 63)
M 10	Section 2.3: Pages 76 – 84	Section 2.3 (1 – 30, 31 – 43 (odd), 51, 53, 57
M 11	Section 2.4: Pages 89 – 97	Section 2.4 (5-13, 17-25 (odd), 41 - 45 (odd), 53, 57)
M 12	Section 2.5: Pages 101 – 109	Section 2.5 (5 – 29 (odd), 45, 51, 55, 59 – 69 (odd))
M 13	Section 2.5: Pages 108 – 110 Section 2.6: Pages 114 – 120	Section 2.5 (79 – 83 (odd)); Section 2.6 (# 11 – 15 (odd), 19, 23 – 27 (odd), 29, 33, 37 – 41 (odd))
M 14	Section 3.1: Pages 135 – 149	Section 3.1 (11 – 17 (odd), 21, 23, 27 – 33 (odd), 35, 39, 45, 47, 51 – 65 (odd), 73, 93, 97, 99)
M 15	Section 3.2: Pages 155 – 161	Section 3.2 (5 – 39 (odd), 47, 49)
M 16	Section 3.3: Pages 164 – 173; Section 3.4: Pages 178 – 183	Section 3.3 (5, 9, 11, 13 – 21 (odd), 29 – 33 (odd)) Section 3.4 (5 – 9 (odd), 21 – 25 (odd))
M 17	Section 3.4: Pages 183 – 192; Section 3.5: Pages 197 – 202	Section 3.4 (11, 15, 17, 35, 37, 41, 43, 45, 53, 55, 57) Section 3.5 (7 – 21 (odd), 27)
M 18	Section 4.1: Pages 216 – 228	Section 4.1 (7, 13, 19, 21, 25, 27, 37, 39, 43, 47, 57 – 61 (odd), 75, 79)
M 19	Section 4.2: Pages 233 – 238	Section 4.2 (5, 11, 15, 27, 31, 37-41 (odd), 49, 51. 53)
M 20	Section 4.3: Pages 242 – 249	Section 4.3 (5 – 25 (odd), 27, 33, 39 – 43 (odd), 51 – 55 (odd), 59, 61, 63)
M 21	Section 4.4: Pages 253 – 257	Section 4.4 (11, 19, 31, 35, 41, 51, 53, 59)
M 22	Section 4.5: Pages 262 – 266	Section 4.5 (7, 9, 19, 25, 29, 41, 45, 57, 73, 77)
M 23	Section 5.1: Pages 279 – 287	Section 5.1 (19, 25, 27, 29, 35, 37, 43, 53, 55, 59)
M 24	Section 5.2: Pages 291 – 300	Section 5.2 (17, 23, 27, 33, 37, 51, 53, 57, 59, 67)
M 25	Section 5.3: Pages 303 – 314	Section 5.3 (12, 15, 19, 21, 25, 27, 35 – 43 (odd), 49, 53, 55, 67, 71, 81)
M 26	Section 5.4: Pages 303 – 314	Section 5.4 (11, 13, 19, 27, 29, 39, 41, 43)
M 27	Section 6.1: Pages 337 – 342 Section 6.2: Pages 346 – 351	Section 6.1 (15, 19, 23, 27, 29, 31, 35, 41,49,51,53,57,61) Section 6.2 (7, 15, 25, 27)
M 28	Section 6.2: Pages 351 – 352 Section 6.3: Pages 357 – 364	Section 6.2 (11, 19, 43, 49) Section 6.3 (13, 15, 21, 27, 29)
M 29	Section 6.4: Pages 367 – 373; Section 6.5: Pages 376 – 380	Section 6.4 (5, 9, 17, 23, 25, 31, 37, 43, 45, 51, 53) Section 6.5 (5, 13, 29, 33)

Module #	Textbook Pages	Textbook Exercises (ungraded)
M 30	Section 6.6: Pages 383 – 388	Section 6.6 (5-9 (odd), 13 - 19 (odd), 25 - 29 (odd), 37 - 45 (odd))
M 31	Section 7.1: Pages 397 – 406	Section 7.1 (1 – 47 (odd), 51 – 63 (odd), 71 – 77 (odd))
M 32	Section 7.2: Pages 409 – 415	Section 7.2 (1 – 41 (odd), 49)
M 33	Section 7.3: Pages 417 – 424	Section 7.3 (9, 15 – 25 (odd), 33, 43)
M 34	Section 7.4: Pages 430 – 436	Section 7,4 (5, 7, 9, 15, 27, 29, 33, 35-47(odd), 55, 61, 65)
M 35	Section 7.5: Pages 440 – 447	Section 7.5 (5, 11, 15, 19, 23, 25, 35, 37, 41, 45)
M 36	Section 7.6: Pages 450 – 456	Section 7.6 (5, 11, 13, 23, 27, 37)

LECTURES: The students are required to attend live lectures (MWF period 3 at CSE A101) on the dates indicated on the Calendar as "M# L" or "Review# L", and the lecture participation will be taken during the class time (see section LECTURE PARTICIPATION below).
If you are missing a live lecture, you can watch it from the corresponding Module on Canvas.

MODULES & DUE DATES: It is advisable to start working on a Module no later than on the date indicated on the Calendar as "M# L" or "Review# L", when the corresponding lecture is delivered, so that you can stay on track and avoid having too many Modules to complete by the due date. Working on Modules requires watching Lectures and completing MyLab assignments, which can include Online Homework (HW) and in-class Learning Catalytics quizzes (LC). Working on a Review Module, which is the last one in each Unit, will help you to prepare for an Exam or a Unit Quiz – there is no HW for a Review module. (For more detail, please see the sections ONLINE HOMEWORK and LECTURE PARTICIPATION below.)

TEXTBOOK HOMEWORK: Textbook homework problems are assigned after each lecture. **They will not be graded** but should be considered as an additional tool for mastering the material. Lists of recommended Textbook Homework problems are posted in Canvas Modules.

Assessments

ONLINE HOMEWORK: Each online **Homework Assignment** (**HW**) is a set of problems assigned in MyLab and numbered according to the Module covered. HW assignment will give you the necessary practice for mastering the material delivered in lecture. Each homework assignment is due at 11:59 pm on the due date – the due dates are listed in the Course Calendar, on Canvas, and in MyLab and Mastering. **A HW will be closed after the deadline and cannot be re-opened without a legitimate reason**. Credit for a HW is given according to the percentage value of the correct work completed. Review of a completed HW after the deadline will become available via the Results in MyLab. There will be a total of 36 HW assignments offered, and the **2 lowest scores will be dropped** at the end of the term.

LECTURE PARTICIPATION: Starting with **M5 L**, lecture participation quizzes will be given in the lecture hall during each lecture. The students are required to register with MyLab & Mastering to use Pearson's **Learning Catalytics** (**LC**) software and get the points for participation. They will access LC from Canvas through the link **Access Pearson** on the left-hand navigation panel. A link to the active session will be shown on MyLab Homepage in the upper right corner. LC allows the student to use their smartphone, tablet, or laptop to respond to the questions in class,

and their responses will be graded and recorded in the gradebook. A total of 36 sessions will be graded. There will be 2 questions per session. Each question is in a "multiple-choice" format and worth 1 point. The grade will be assigned as 75% for participation and 25% for correctness. The students will receive a full credit of 1.75 points by answering both questions and one of them correctly. If the students answer both questions correctly, they will receive 2 points for the session, which includes 0.25 bonus. **The 4 lowest scores on the LC quizzes will be dropped at the end of the term** to compensate for occasional absences, device failures, etc.
Lecture Participation cannot be "excused" but **can be made-up** (see **Makeup Policy** below).

All issues with in-class LC quizzes **must be reported in-person in the lecture hall immediately after the lecture – late requests and/or requests sent via email will not be considered.**

EXAMS & QUIZZES: There will be the Syllabus Quiz, three midterm Exams, two Unit Quizzes, and the Final Exam during the term.

Syllabus Quiz is offered in MyLab and Mastering at the beginning of the term (the due date is in the Calendar). It contains 15 true-false questions on the course policies and procedures, at 1 point each. The duration of the Quiz is 30 minutes, and you will have 1 attempt to complete it. You can Review completed Quiz via Results in MyLab any time after the deadline.

All midterm Exams and the Final are assembly exams: the midterm Exams will be given from 8:20 pm to 9:50 pm and the Final - from 12:30 pm to 2 pm on the dates indicated in the Calendar.
The mandatory Final Exam is cumulative: it covers Units 1-5.
Room assignments will be announced later. While taking an exam, the students will only be permitted to have pencils, pens, erasers, and a valid picture ID. Scratch paper and scantrons will be provided. Each Exam contains 22 questions at 4 points each. The grade on each exam will be calculated out of 80 points (2 questions are for bonus). The time allowed is 90 minutes.

Unit Quizzes, Quiz-Unit1 and Quiz-Unit5, are mandatory, but not proctored – they are "open note" quizzes. The Unit Quizzes must be taken from within MyLab and Mastering on the dates indicated in the Calendar: each Quiz opens at 12 am and closes at 11:59 pm on the same day. The time allowed is 75 minutes. A Unit Quiz contains 20 multiple-choice questions at 2 points each and will be graded out of 40 points (no bonus). Review of a completed Quiz will become available after the deadline and can be accessed from the Results in MyLab.
For more information on Exams and Unit Quizzes, please visit the link Exam Information on the Canvas course main page.

Software Policy

Scientific calculators are required in the course. A graphing calculator is needed for some homework problems, but can be replaced with suitable software, such as MATLAB, which is available via UF Apps. **Calculators are not allowed on Exams!**
We will be using MATLAB for some homework problems and Projects. The instructions on how to access MATLAB and work in the Live Script are in Project 0. The students **are not required** to write their own MATLAB codes in this course - they will be using basic codes given in Lectures and Projects and run them in MATLAB.

Projects

There will be two Projects offered in the course: an individual bonus **Project 0** and a mandatory **Group Project 1** - both must be completed in MATLAB application.
Project 0 is for BONUS – it allows the students to start learning MATLAB programming environment in relation to the topics covered in the course. Project 0 can also be used as reference when working on Project 1 and on the HW. Project 0 is offered at the beginning of the term, and it is worth 10 points. The score earned on Project 0 will be added to the score earned on Project 1.
Group Project 1 is **mandatory** and worth 60 points - the students will be working in groups of up to 7 people throughout the term on 6 Exercises (at 10 points each) using MATLAB software.

For more information on the Projects, please visit the link Projects on Canvas main page.

Makeup Policy

IMOPRTANT NOTE: We have timeframes for submitting requests for make-ups/extensions on the assignments missed on legitimate reasons. If you cannot submit your request within a required timeframe due to extenuating circumstances, you must submit it at the earliest possible time and prior to the end of the term. The request must be accompanied by documentation that justifies the "late" submission.
MAKEUP POLICY ON ONLINE HOMEWORK AND QUIZZES**:** If you miss a deadline for **HW** due to an excused reason (See UF Attendance Policies), you can send an email to Dr. Williamson via **Canvas** no later than three (3) days after the deadline and request an extension on the specified HW assignments.
If you miss a Unit Quiz or Syllabus Quiz, you must send a request for a make-up no later than within three (3) days after the deadline - missing a Quiz without a legitimate reason will result in a 5-point penalty.

MAKEUP POLICY ON LECTURE PARTICIPATION: **A lecture, missed on a legitimate reason, cannot be "excused", but can be made-up**: to make-up a lecture with a **LC quiz**, the student **must send an email** to the Instructor no later than on the date of the lecture with a **request to make-up a specified lecture**, and the instructor will email the student the ID of a make-up LC session, which will be due on the following day at 11:59 pm.

MAKEUP POLICY ON EXAMS: You can **make up one missed midterm Exam** on the date listed in the Calendar as **Make-up**. If you are missing a midterm Exam without a legitimate reason, you are allowed to take the **Make-up** on the Make-up date but with a **10-point penalty**.
If you are **missing a midterm Exam on an excused reason** (See UF Attendance Policies) or due to a conflict with an assembly exam of a higher numbered course, you must send a request for a make-up exam to Dr. Williamson **via Canvas e-mail** either prior to the regular exam or within one (1) day after the exam, and the instructor **may ask for documentation.**
If you are missing the Final Exam, you must send a request for a make-up no later than within one (1) day after the Final Exam. The **make-up** for the Final will be given during the Final Exams week – the date, time, and location will be announced later. Missing the **Final Exam** without a legitimate reason will result in a **10-point penalty**.

IMPORTANT:
A **legitimate reason** for requesting an extension/make-up on a specified assignment must be clearly stated in the student's email, and **the instructor may ask for documentation** which must be presented in a timely manner. Providing only the documentation, **without sending a timely request specifying the assignment**, will not automatically result in giving the student an extension or a make-up.
Our assembly exams have precedence over the classes, non-assembly exams, and assembly exams of the lower numbered courses.

You can discuss with your Instructor a midterm Exam, Unit Quiz, HW, LC quiz, Syllabus Quiz, and Projects **within three (3) days,** and the Final Exam – **within one (1) day** upon receiving the grades if there is a grading error or any other problem**. Late requests will not be accepted!**

All issues with Canvas, HW & Quizzes in MyLab, and UF Apps/MATLAB **must be reported immediately and documented** when sending a request for an extension or a retake**.**

Grades

COURSE GRADE: The course grade is assigned based on a student's performance in the following weighted categories:

1	Syllabus Quiz	@ 15 points	15 points	2.37 %
32	Lecture Participation	@ 1.75 points	56 points	8.85 %
34	Online Homework	@ 3 points	102 points	16.11 %
2	Unit Quizzes	@ 40 points	80 points	12.64 %
3	Midterm Exams	@ 80 points	240 points	37.91 %
1	Final Exam	@ 80 points	80 points	12.64 %
1	Group Project 1	@ 60 points	60 points	9.48 %
		Total:	633 points	100 %

The course grade is the grade satisfying the conditions below and **will be adhered** to:

	Minimum %		**Minimum %**
A	90 %	C	66 %
A-	86 %	C-	62 %
B+	82 %	D+	58 %
B	78 %	D	54 %
B-	74 %	D-	50 %
C+	70 %	E	0 %

Note: We have a 0.5% round-up margin towards a higher letter grade.

GRADE POSTING: All grades will be posted in a timely manner on E-Learning (Canvas) at https://elearning.ufl.edu/. We strongly recommend verifying your grades regularly. **You should immediately report any problem with your grade to your instructor.**

METHODS FOR PUBLIC AND PRIVATE COMMUNICATIONS:

Course Questions

- Check this Syllabus to make sure your question is not already answered.
- If you can't find the answer to your question there, check the Course Questions Discussion Board in Canvas to see if anyone else has the same question; if your question has not already been asked, post your question there.
- Contact the instructor or TA via Inbox tool in Canvas.

Personal Questions

If you have a personal question (for example, a question about your grade), contact the instructor using the Inbox tool in Canvas or visit the instructor's office hours.

TECHNICAL HELP: In the event that you have technical difficulties with Canvas, please call the **UF Help Desk** (352) 392-4357 - select option 2, or visit the website Computing Help Desk. The Help Desk is located on the ground floor of the Hub. If your technical difficulties cause you to miss a due date, you MUST report the problem to the Help Desk. You will be given a ticket number. Include the ticket number in an e-mail to your instructor to request a make-up/extension.
Pearson MyLab and Mastering Help: Visit the help and support sites below if you have technical difficulties accessing your eText or using MyLab and Mastering.

- MyLab Math Help & Support.
- Help Request Form.

HELP**:** In addition to visiting your instructor's and TA's office hours, the Little Hall Math Lab (at LIT 215) offers free drop-in assistance with math homework Monday–Friday from 10:30 am - 4:00 pm. Some other resources are available under the Office of Academic Support .

Materials and Supplies Fees: $3.00

Please refer to the UF Academic Policies and Resources page for the official policies on grading, class attendance, online evaluation, etc.

Course Goals/Objectives

1. Students will study properties of algebraic, exponential, and logarithmic functions and construct mathematical models involving these functions
2. Students will learn the basics of the limit, continuity, and the derivative, including their definitions, properties, and practical applications.
3. Students will learn the techniques of computing derivatives of algebraic, exponential, and logarithmic functions commonly used in business, economics, and the social sciences.
4. Students will explore the interpretation of the derivative as an instantaneous rate of change of a function and apply it to real word problems such as marginal analysis, optimization, and related rates.
5. Students will learn the concept of indefinite integral as a family of antiderivatives and explore basic integration techniques.
6. Students will interpret the concept of the definite integral of a function as the total net change in an antiderivative and use it in business and life-science applications.
7. Students will analyze and construct mathematical models based on functions, derivatives, and integrals and consider these models to describe quantitative relationships in various contexts.

8. Students will study how calculus can be used to interpret and solve problems involving cost, revenue, profit, elasticity, and growth.

Student Learning Outcomes Categories and Mathematics Student Learning Outcomes.

Category	Mathematics SLO	Assessments
Content	Employ strategies in fundamental mathematics, including at least one of the following: solving equations and inequalities, logic, statistics, algebra, or trigonometry.	All assignments offer opportunities for students to demonstrate content knowledge.
Critical Thinking	Reason in abstract mathematical systems and use mathematical models to solve problems. Apply mathematical concepts effectively to real-world situations.	Projects, homework, and quizzes.
Communication	Formulate mathematical models and arguments. Communicate mathematical solutions clearly and effectively.	Projects and homework problems on applications.

Course Meeting the State SLOs

- Students will demonstrate competence in the terminology, concepts, theories, and methodologies used within the discipline.
- Students will be able to employ strategies in solving problems in limits, differentiation, and integration.
- Students will formulate and solve mathematical models using algebraic, exponential, and logarithmic functions, differentiation, and integration, and will communicate mathematical solutions clearly and effectively.
- Students will apply mathematical models to business, economics, life, and social sciences using algebraic, exponential, and logarithmic functions, differentiation and integration, calculation of exact areas between curves, applications of rates of change, identifying the limits of functions, using the derivative as a tool for approximation through differentials and linear approximation, solving optimization problems, among other applications of calculus to solving problems.
- Students will develop and solve mathematical models of real-world word problems.