

<b>Course ID:</b>	<b>Course Title:</b>	<b>Fall 2020</b>
MA 149	Introductory Calculus	<b>Prerequisite: Math 30</b>
		<b>Credits: 3</b>

Commented [JW1]:

Class Information		Instructor Information		Important Dates	
<b>Days:</b>	Tue, Thurs	<b>Instructor:</b>	John Wiest, M.Sc., B.Sc.	<b>First day of classes:</b>	Sept. 9, 2020
<b>Time:</b>	8:15AM – 9:30 AM	<b>Email:</b>	<a href="mailto:jwiest@ambrose.edu">jwiest@ambrose.edu</a>	<b>Last day to add/drop, or change to audit:</b>	Sept. 20, 2020
<b>Room:</b>	A2133	<b>Phone:</b>	403-410-6915	<b>Last day to request revised exam:</b>	Nov. 2, 2020
<b>Lab/ Tutorial:</b>	Mon	<b>Office:</b>	L2115	<b>Last day to withdraw from course:</b>	Nov. 20, 2020
	1:30 PM- 3:30 PM	<b>Office Hours:</b>	Tues 12:15 PM	<b>Last day to apply for coursework extension:</b>	Nov. 23, 2020
<b>Final Exam:</b>	TBA			<b>Last day of classes:</b>	Dec. 14, 2020

### Course Description

This course teaches functions and graphing, integrals and derivatives, as well as exponential, trigonometric, and logarithmic functions.

The course consists of 2½ hours of lecture and 1¼ hour of lab/tutorial per week. The course will include 5 main quizzes, a Midterm and a Final Exam, as well as a daily Quick Quiz. The main quizzes will be administered during the class tutorial hours. The best 4 marks on the main quizzes will be kept for marks. The Midterm and Final exams will be cumulative. No formula sheets will be allowed but students may bring a hand-held non-programmable calculator if they so choose.

### Expected Learning Outcomes

It is the aim of the course that students:

1. Gain a greater conceptual understanding of the real numbers and the number line.
2. Gain a greater appreciation of linearity and the line concept
3. Understand limits of functions at specific points both conceptually and procedurally.
4. Understand the definition of the derivative, learn how to compute it, and learn many of its uses.
5. Understand the definition of the integral, learn how to compute it, and learn some of its uses.

## Textbooks

The course textbook is an open source, online textbook from the website openstax.org.

The book can be accessed through the link <https://openstax.org/details/books/calculus-volume-1>.

Calculus (Vol. 1)	Gilbert Strang & Edwin Herman	978-1-947172-13-5
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## Course Outline

### Differential Calculus

1. Functions
2. Limits and Continuity
3. Derivatives
  - a. Limit definition of the Derivative
  - b. The Power Rule
  - c. The Product Rule
  - d. The Quotient Rule
  - e. The Chain Rule
  - f. Implicit Differentiation

### Applications of Derivatives

1. Graph Sketching
2. Optimization
3. Related Rates

### Integral Calculus

1. Anti-derivatives and the Fundamental Theorem of Calculus
2. Method of Substitution

### Areas between curves

Introduction to Differential Equations.

## Requirements:

Online Assignments	40%
Midterm Exam	25%
Final Exam	35%

The Online Assignments will be accessed through the Lyryx Learning webpage ([www.lyryx.com](http://www.lyryx.com)). Students will need to purchase access to the online homework (it should be around \$40). Details on the specific course section and how to access this will be on the course moodle page. If you do not purchase this access, you will not be able to complete the Online

Assignments and you will have difficulty passing the course. There will be 6 online assignments, but I will record your highest 5 marks.

**Attendance:**

Students are expected to attend all lectures and labs to ensure success on exams, and quizzes. Students not attending lectures may find themselves missing information not covered in the textbook. Any student who is absent for an exam or misses an assignment due date should speak to the professor and, where possible, provide a doctor's note.

**Grade Summary:**

The available letters for course grades are as follows:

<u>Letter Grade</u>	<u>Percentage</u>	<u>Description</u>
A+	96-100%	
A	91-95%	Excellent
A-	87-90%	
B+	83-86%	
B	79-82%	Good
B-	73-78%	
C+	69-72%	
C	64-68%	Satisfactory
C-	59-63%	
D+	55%-58%	Minimal Pass
D	50-54%	
F	Below 50%	Failure

Because of the nature of the Alpha 4.00 system, there can be no uniform University-wide conversion scale. The relationship between raw scores (e.g. percentages) and the resultant letter grade will depend on the nature of the course and the instructor's assessment of the level of each class, compared to similar classes taught previously.

Please note that final grades will be available on student registration system. Printed grade sheets are not mailed out.

**Other:**

October 7: Deeper Life Conference (No daytime Classes)

October 12: Thanksgiving Day (No Classes)

**October 15: Midterm Exam**

November 9-14: Reading Week (No Classes)

## Ambrose University Academic Policies:

### Communication

All students have received an Ambrose e-mail account upon registration. It is the student's responsibility to check this account regularly as the Ambrose email system will be the professor's instrument for notifying students of important matters (cancelled class sessions, extensions, requested appointments, etc.) between class sessions. If students do not wish to use their Ambrose accounts, they will need to forward all messages from the Ambrose account to another personal account.

### Registration

During the **Registration Revision Period** students may enter a course without permission, change the designation of any class from credit to audit and /or voluntary withdraw from a course without financial or academic penalty or record. Courses should be added or dropped on the student portal by the deadline date; please consult the List of Important Dates. After that date, the original status remains and the student is responsible for related fees.

Students intending to withdraw from a course after the Registration Revision Period must apply to the Office of the Registrar by submitting a "Request to Withdraw from a Course" form or by sending an email to the Registrar's Office by the **Withdrawal Deadline**; please consult the List of Important Dates on the my.ambrose.edu website. Students will not receive a tuition refund for courses from which they withdraw after the Registration Revision period. A grade of "W" will appear on their transcript.

Students wishing to withdraw from a course, but who fail to do so by the applicable date, will receive the grade earned in accordance with the course syllabus. A student obliged to withdraw from a course after the Withdrawal Deadline because of health or other reasons may apply to the Registrar for special consideration.

### Exam Scheduling

Students, who find a conflict in their exam schedule must submit a Revised Examination Request form to the Registrar's Office by the deadline date; please consult the List of Important Dates. Requests will be considered for the following reasons only: 1) the scheduled final examination slot conflicts with another exam; 2) the student has three final exams within three consecutive exam time blocks; 3) the scheduled final exam slot conflicts with an exam at another institution; 4) extenuating circumstances. Travel is not considered a valid excuse for re-scheduling or missing a final exam.

### Electronic Etiquette

Students are expected to treat their instructor, guest speakers, and fellow students with respect. It is disruptive to the learning goals of a course or seminar and disrespectful to fellow students and the instructor to use electronics for purposes unrelated to the course during a class session. Turn off all cell phones and other electronic devices during class. Laptops should be used for class-related purposes only. Do not use iPods, MP3 players, or headphones. Do not text, read, or send personal emails, go on Facebook or other social networks, search the internet, or play computer games during class. Some professors will not allow the use of any electronic devices in class. The professor has the right to disallow the student to use a laptop in future lectures and/or to ask a student to withdraw from the

session if s/he does not comply with this policy. Repeat offenders will be directed to the Dean. If you are expecting communication due to an emergency, please speak with the professor before the class begins.

### Academic Policies

It is the responsibility of all students to become familiar with and adhere to academic policies as stated in the Academic Calendar. Personal information (information about an individual that may be used to identify that individual) may be required as part of taking this class. Any information collected will only be used and disclosed for the purpose for which the collection was intended. For further information contact the Privacy Compliance Officer at [privacy@ambrose.edu](mailto:privacy@ambrose.edu).

### Extensions

Although extensions to coursework in the semester are at the discretion of the instructor, students may not turn in coursework for evaluation after the last day of the scheduled final examination period unless they have received permission for a course Extension from the Registrar's Office. Requests for course extensions or alternative examination time must be submitted to the Registrar's Office by the deadline date; please consult the List of Important Dates. Course extensions are only granted for serious issues that arise "due to circumstances beyond the student's control."

### Appeal of Grade

An appeal for change of grade on any course work must be made to the course instructor within one week of receiving notification of the grade. An appeal for change of final grade must be submitted to the Registrar's Office in writing and providing the basis for appeal within 30 days of receiving notification of the final grade, providing the basis for appeal. A review fee of \$50.00 must accompany the appeal. If the appeal is sustained, the fee will be refunded.

### Academic Integrity

We are committed to fostering personal integrity and will not overlook breaches of integrity such as plagiarism and cheating. Academic dishonesty is taken seriously at Ambrose University as it undermines our academic standards and affects the integrity of each member of our learning community. Any attempt to obtain credit for academic work through fraudulent, deceptive, or dishonest means is academic dishonesty. Plagiarism involves presenting someone else's ideas, words, or work as one's own. Plagiarism is fraud and theft, but plagiarism can also occur by accident when a student fails or forgets to acknowledge to another person's ideas or words. Plagiarism and cheating can result in a failing grade for an assignment, for the course, or immediate dismissal from the university. Students are expected to be familiar with the policies in the current Academic Calendar that deal with plagiarism, cheating, and the penalties and procedures for dealing with these matters. All cases of academic dishonesty are reported to the Academic Dean and become part of the student's permanent record.

**Note:** Students are strongly advised to retain this syllabus for their records.

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