READ THIS SYLLABUS CAREFULLY. YOU ARE RESPONSIBLE FOR KNOWING THIS INFORMATION!

Title: Calculus I

Course Description: Limits and continuity, derivatives, applications of derivatives including transcendental functions. Antiderivatives, definite integrals with applications.

Prerequisite: MATH 119 (Precalculus with Trigonometry), with a grade of C− or higher, OR MATH 115 (Trigonometry) and MATH 116 (Precalculus), both with grades of C− or higher.

Instructor: F. Latour

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Office: Marcus White 117

Office Hours: 
- Mondays: 1:30–2:30pm
- Tuesdays: 12:30–3pm
- Wednesdays: 1:30–3pm
- Other times by appointment.


Class Meeting Times: Mondays and Wednesdays, 10:50am–12:30pm in room 109, Frank J. Diloreto Hall.

Course Requirements: Attend and participate in class regularly; complete homework assignments; take quizzes and tests, as scheduled. A general rule for any college course is that you are expected to put in at least 2 hours of work outside of class for every hour in class.

Calculator Use: The recommended calculator for this course is the TI-83+. Similar calculators such as the TI-83, TI-84, TI-84+ and TI-86 are also acceptable and may be used for examinations. Calculators with a symbolic capability such as the TI-89 and TI-92 are not allowed on examinations. If you are wondering whether your calculator is acceptable, please ask the instructor.

Cell phones and other communication devices: Must be turned off at all times during class. No texting allowed in class.
**Course Objectives:** After taking this course, the student should be able to:

1) Calculate limits, including one-sided limits, infinite limits, limits at infinity, using algebra and using L'Hôpital's Rule;
2) State and apply the precise definition of a limit;
3) State the definition of continuity, and determine where a function is continuous;
4) Calculate the derivative of a function, using the definition of the derivative, the derivative formulas, and implicit differentiation;
5) Use the derivative to find the equation of the tangent line to a graph at a point, and to approximate the value of a function at a point;
6) Use the derivative to solve various problems, including problems on related rates, optimization, and curve sketching;
7) Calculate the general antiderivative of a function, using simple rules and using substitution;
8) Calculate the approximate value of a definite integral using Riemann sums;
9) Calculate the exact value of a definite integral using Riemann sums and using the Fundamental Theorem of Calculus;
10) Use the definite integral to calculate areas.

**Evaluation**

Minimum averages have been established for each of these grades:

<table>
<thead>
<tr>
<th>Grade</th>
<th>B+</th>
<th>87%</th>
<th>C+</th>
<th>77%</th>
<th>D+</th>
<th>67%</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>93%</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>A−</td>
<td>90%</td>
<td>83%</td>
<td>C−</td>
<td>70%</td>
<td>D−</td>
<td>60%</td>
</tr>
<tr>
<td>B</td>
<td>83%</td>
<td></td>
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<td></td>
<td></td>
<td></td>
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<tr>
<td>B−</td>
<td>80%</td>
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<tr>
<td>C</td>
<td>73%</td>
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<tr>
<td>D</td>
<td>63%</td>
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</tbody>
</table>

The average for the course will be based on the following weights:

<table>
<thead>
<tr>
<th>Component</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>Homework</td>
<td>12%</td>
</tr>
<tr>
<td>Quizzes</td>
<td>10%</td>
</tr>
<tr>
<td>Exam 1</td>
<td>17%</td>
</tr>
<tr>
<td>Exam 2</td>
<td>17%</td>
</tr>
<tr>
<td>Exam 3</td>
<td>17%</td>
</tr>
<tr>
<td>Final Examination</td>
<td>27%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100%</strong></td>
</tr>
</tbody>
</table>

**Schedule of Important Dates**

- **Exam 1:** Wednesday, February 17, in class
- **Exam 2:** Wednesday, March 16, in class
- **Exam 3:** Wednesday, April 20, in class
- **Final Examination:** Wednesday, May 11, 11am−1pm

*Please note:* The final examination for this course is cumulative. It covers the entire course.

**Quizzes** will be on Wednesdays (other than exam days), starting on the 27th of January. Usually, the quiz will be based on the homework problems that are due on the day it is given (exceptions will be announced in class).

**Homework** will normally be due on Wednesdays of weeks that do not have an exam and on Mondays of weeks that have an exam. You are allowed to collaborate with other students on homework, but the solutions that you submit must be your own. Simply copying another student’s work (or allowing another student to copy your work) is considered cheating and is not acceptable.

Occasionally, there may be changes to the course schedule (for example, if classes are cancelled because of bad weather). Changes will be announced in class.
University Policies:

1. You must take the final examination at the time specified in the course selection book: **Wednesday, May 11, 11:00am–1:00pm.**

2. If you need course adaptations or accommodations because of a disability, if you have emergency medical information to share with me, or if you need special arrangements in case the building must be evacuated, please make an appointment with me as soon as possible. My telephone numbers and office hours are given above.

I will need a copy of the accommodation letter from Student Disability Services in order to arrange your class accommodations. Contact Student Disability Services, room 101, Emma Willard Hall, if you are not already registered with them. Student Disability Services maintains the confidential documentation of your disability and assists you in coordinating reasonable accommodations with your faculty.

3. In the event of a weather emergency which requires curtailment or cancellation of classes, listen to WTIC (1080 AM) or call (860) 832-3333 for the “general snow message.”

4. The last day to withdraw from a course is **Monday, April 18.** Approvals for withdrawal are not required; however, it is strongly recommended that students consult with their instructor and academic advisor prior to deciding to withdraw. Cessation of attendance, notice to the instructor, or telephone calls to the Enrollment Center are not considered official notice of a student’s intention to drop the course.

After April 18 withdrawals are allowed **only under extenuating circumstances** and require approval of the course instructor and of the Chair of the Department of Mathematical Sciences. Poor academic performance is **not** considered an extenuating circumstance.

5. All students are expected to demonstrate integrity in the completion of their coursework. Academic integrity means doing one's own work and giving proper credit to the work and ideas of others. It is the responsibility of each student to become familiar with what constitutes academic dishonesty and plagiarism and to avoid all forms of cheating and plagiarism. Students who engage in plagiarism and other forms of academic misconduct will face academic and possibly disciplinary consequences. Academic sanctions can range from a reduced grade for the assignment to a failing grade for the course. From a disciplinary standpoint, an Academic Misconduct Report may be filed and a Faculty Hearing Board may impose sanctions such as probation, suspension or expulsion.

For further information on academic misconduct and its consequences, please consult the Student Code of Conduct ([http://www.ccsu.edu/StudentConduct](http://www.ccsu.edu/StudentConduct)) and the Academic Misconduct Policy ([http://www.ccsu.edu/AcademicIntegrity](http://www.ccsu.edu/AcademicIntegrity)). This policy is rigorously enforced by the Department of Mathematical Sciences.

Resources Available:

1. If you need help, take advantage of your instructor's office hours. **Do not wait until just before the first test to do so.**

2. The Learning Center is located in Room 101, Emma Willard Hall. **Free tutoring is available.** A schedule for hours the Center is open will be posted soon after the beginning of the semester.

3. **Form a study group with other students in your section.** Explaining solutions to homework problems to each other is a good way to learn.

4. A list of private tutors for hire is available in the math department office, Room 128, Marcus White, (860) 832-2835.
Course Policies:

**Late Homework:** Written homework that is handed in late will be penalized as follows:

- Homework that is at least one day but fewer than seven days late: penalty is 15% of the points earned on the homework.
- Homework that is at least seven days but fewer than fourteen days late: penalty is 30% of the points earned on the homework.
- Homework that is at least fourteen days late but is handed in on or before the last day of the semester: penalty is 50% of the points earned on the homework.
- Homework that is handed in after the end of the semester’s final exams will not be graded.

Online homework that is completed after 11:59pm on the due date will be penalized 20%; the penalty will only apply to answers that were submitted after the deadline. Online homework that is completed after the end of the semester’s final exams will not count.

**Missing Class:** It is your responsibility to learn the material that you missed if you are absent from class. There are no make-up quizzes; if you have a valid excuse for missing a quiz, you may be given an “excused absence”, at the instructor’s discretion. An “excused absence” means that your missed quiz will be excluded from your quiz average (and thus will not count against your grade).

**Missing Examinations:** Missing an examination is a very serious matter.

If you know in advance that you will have to miss an examination, you MUST inform your instructor at least two weeks before the examination. In that case, you will normally be offered an alternate time for the examination.

If you miss an examination because of an emergency, you need to contact your instructor as soon as possible, either in person or by e-mail, within 24 hours of the beginning of the examination. DO NOT wait until the next class to contact your instructor!

**Academic dishonesty (“cheating”):** The standard penalty for academic dishonesty is a grade of 0% on the homework, quiz or examination. The following are examples of academic dishonesty:

- Copying another student’s homework solutions;
- Copying a tutor’s homework solutions;
- Using, in any way, an instructor’s solutions manual (an instructor’s solutions manual is for use by your instructor only, and not by students or tutors);
- Copying solutions from the internet;
- Bringing a formula sheet to an examination (whether or not you plan on using it);
- Writing formulas on your hand, calculator, etc.;
- Storing programs, notes or formulas or any other course-relevant information in your calculator’s memory.

If you are thinking of doing anything that you think is ethically ambiguous, you should ask your instructor if it is cheating. There is no penalty for asking!

The following are NOT cheating:

- Getting help from another student on homework, or working with another student on homework problems, provided that each student writes his/her solutions individually;
- Getting homework help from tutors (Learning Center or private tutors), provided that you write your solution by yourself;
- Getting homework help from your instructor or from another professor, provided that you write your solution by yourself;
- Getting homework help from your instructor or from another professor, provided that you write your solution by yourself.
Course Material:

I am planning on covering the material contained in the following sections of the textbook:

**Chapter 1: Functions (REVIEW)**
1.1 Functions and Their Graphs
1.2 Combining Functions; Shifting and Scaling Graphs
1.3 Trigonometric Functions
1.4 Graphing with Software
1.5 Exponential Functions
1.6 Inverse Functions and Logarithms

**Chapter 2: Limits and Continuity**
2.1 Rates of Change and Tangents to Curves
2.2 Limit of a Function and Limit Laws
2.3 The Precise Definition of a Limit
2.4 One-Sided Limits
2.5 Continuity
2.6 Limits Involving Infinity; Asymptotes of Graphs

**Chapter 3: Differentiation**
3.1 Tangents and the Derivative at a Point
3.2 The Derivative as a Function
3.3 Differentiation Rules
3.4 The Derivative as a Rate of Change
3.5 Derivatives of Trigonometric Functions
3.6 The Chain Rule
3.7 Implicit Differentiation
3.8 Derivatives of Inverse Functions and Logarithms
3.9 Inverse Trigonometric Functions
3.10 Related Rates
3.11 Linearization and Differentials

**Chapter 4: Applications of Derivatives**
4.1 Extreme Values of Functions
4.2 The Mean Value Theorem
4.3 Monotonic Functions and the First Derivative Test
4.4 Concavity and Curve Sketching
4.5 Indeterminate Forms and L’Hôpital’s Rule
4.6 Applied Optimization
4.7 Newton’s Method
4.8 Antiderivatives

**Chapter 5: Integration**
5.1 Area and Estimating with Finite Sums
5.2 Sigma Notation and Limits of Finite Sums
5.3 The Definite Integral
5.4 The Fundamental Theorem of Calculus
5.5 Indefinite Integrals and the Substitution Method
5.6 Definite Integral Substitutions and Area Between Curves
To register for MATH 152-02:

2. Under Register, select Student.
3. Confirm you have the information needed, then select OK! Register now.
4. Enter your instructor’s course ID: latour99054, and Continue.
5. Enter your existing Pearson account username and password to Sign In.
   You have an account if you have used a Pearson product, for example: MyMathLab, MyITLab, MyPsychLab, MySpanishLab or Mastering, such as MasteringBiology.
   ➞ If you don’t have an account, select Create and complete the required fields.
6. Select an access option.
   ➞ Use the access code that came with your textbook or that you purchased separately from the bookstore.
   ➞ Buy access using a credit card or PayPal account.
   ➞ If available, get 14 days temporary access. (The link is near the bottom of the screen.)
7. From the confirmation page, select Go To My Courses.
8. On the My Courses page, select the course tile MATH 152-02 to start your work.

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2. Select Sign In.
3. Enter your Pearson account username and password, and Sign In.
4. Select the course tile MATH 152-02 to start your work.

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4. Select Upgrade access from the course tile MATH 152-02.
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