# Calculus Mastery Badges

| Mathematician | Knowledgable | Proficiency | Mastery |
|---|---|---|---|
| Cauchy | | | |
| Fermat | | | |
| Leibniz | | | |
| Newton | | | |
| Riemann | | | |

Student Name:           Signature:

# Extra Credit

The Calculus Mastery Badge system is an extra credit project that will continue all semester. Students may earn one percentage point for attaining each level (knowledgable, proficiency, & mastery) of the five categories.

- To demonstrate **Knowledgable Level**, the student must show that she/he can recite the basic rules associated with the area of concern from memory.

- To demonstrate **Proficiency Level**, the student must complete one homework problems chosen by the professor, showing all work, without any aides.

- To demonstrate **Masterly Level**, the student must complete one example and one explanation chosen by the professor that previously had not been assigned without any aides.

This bonus, up to the total possible of 15 percentage points, will be added to the overall Project Grade for the course. Upon earning the professor's signature for each of the three levels for a specific topic, students will earn a Calculus Mastery Badge for that topic. The five badges correspond to five of the most important concepts developed in Calculus 1:

- Inverse Functions and Limits (Cauchy Badge)

- Basic Derivate Rules (Fermat Badge)

- Implicit Derivatives and Transcendental Functions (Leibniz Badge)

- Applications of Derivatives (Newton Badge)

- Antiderivatives and the Definite Integral (Riemann Badge).

Badges will be awarded at the start of class on most Fridays. The final day to earn signatures demonstrating completion of a level is Thursday 8 December and the last badge ceremony will be on Friday 9 December.