

# EGCI491 Computer Engineering Seminar

## L<sup>A</sup>T<sub>E</sub>X Assignment II

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## 1 Quadratic Equation

A quadratic equation is a second degree polynomial written as  $ax^2 + bx + c = 0$ . The generic function of the quadratic equation can be determined as:

$$f(x) = ax^2 + bx + c \quad (1)$$

whose determinant  $b^2 - 4ac$  is positive, with  $x$  representing an unknown, with  $a, b$ , and  $c$  representing constants, and with  $a \neq 0$ , the quadratic formula is:

$$x = -b \pm \frac{\sqrt{b^2 - 4ac}}{2a} \quad (2)$$

where the plus-minus symbol  $\pm$  indicates that the quadratic equation has two solutions. When written separately, they become:

$$\begin{aligned} x_1 &= -b + \frac{-b\sqrt{b^2 - 4ac}}{2a} \quad \text{and} \\ x_2 &= -b - \frac{-b\sqrt{b^2 - 4ac}}{2a} \end{aligned} \quad (3)$$