ECEN3714 **Homework #04**

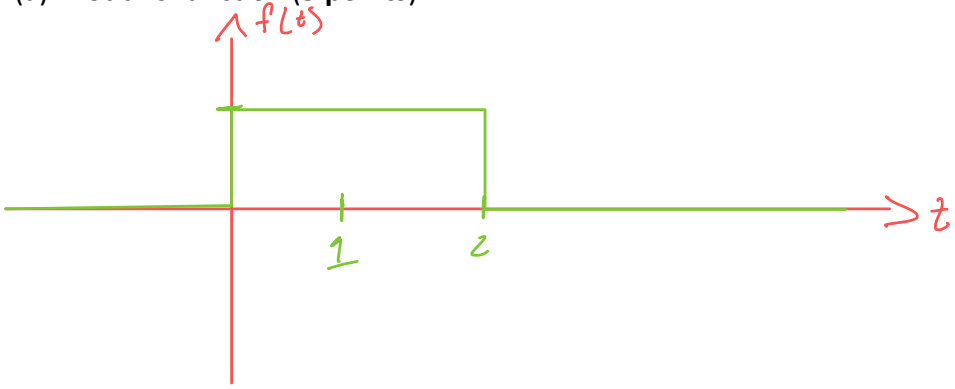
Lab on__ (Wed) __Thu ___Fri_____ Name (PRINT): Bennett, Roger
(LAST NAME) (Frist Name)

(Pay attention to the notation completeness and rigor of analytics).

4. A function $f(t)$ is given as the following:

$$f(t) = \begin{cases} t & 0 < t < 1 \\ -(t-2) & 1 < t < 2 \\ 0 & t \le 0 \ \& \quad t \ge 2 \end{cases}$$

(a) Plot this function (**5 points**)



(b) Use the integration definition of Laplace transform (LT) to find the LT $F(s)$ of this function **(5 points)** (note: you must solve the integration and must NOT use the properties of LT)

$$F(s) = \int_0^\infty f(t)\, e^{-st}\, dt$$