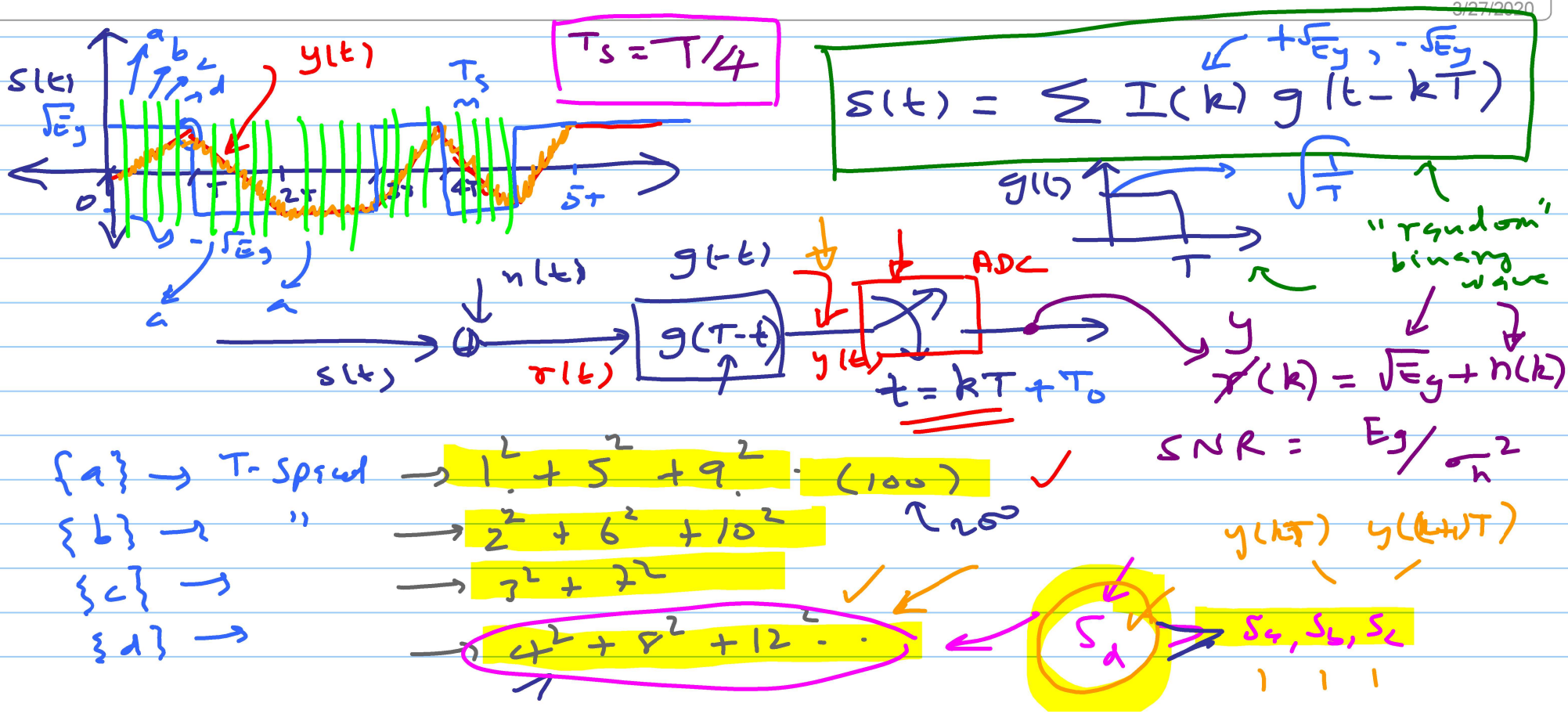
EE4140 **Class # 4** - August 21, 2020

Note Title 3/27/2020



$y(t) = z(t) + \tilde{n}(t)$

$z(t) \in \sqrt{E_g}, -\sqrt{E_g}$

$r(k) = \pm\sqrt{E_g} + n(k)$

$= \pm\alpha\sqrt{E_g} + n(k)$

$0 < \alpha \leq 1$

0.5 dB

$T_s = T/4$ for ever

"Timing slip"

$T_R$ 1.01 MHz
0.99 MHz

$T_T = 1\,\mu sec$

$T_X$ 1 MHz

kT $(k+1)T$ $(k+2)T$

$T_s = T/8$

$(s+n)^2 = s^2 + \tilde{s}\tilde{n} + \tilde{n}s + n^2$

$T_s = T/8, T/16$

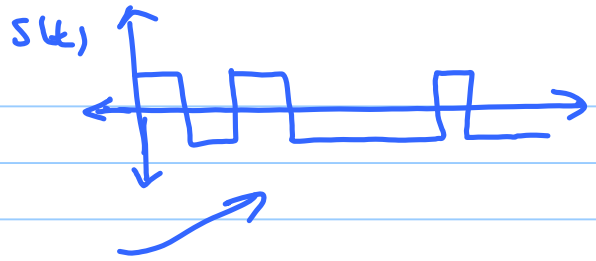
$T_s = T/2$

Nyquist "Interpolator"

What is the "band-width" of $s(t)$ ?

PSD

Next




"Random Binary wave"

S(t) → WSS rp

S(t) → CSS rp

PSD $S_s(f) \rightleftharpoons R_{ss}(\tau)$