

Unabugwu Chidubem Allwell
Computer Engineering
17/ENGCO-10+8
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- 1) Command Windows
- 2) clc
- 3) Syms t
- 4) $V(t) = 100 * \cos(120 * \pi * t)$
- 5) $r = \text{diff}(v)$
- 6) $C = 100 * (10 - 6)$
- 7) $i = \text{dv}^2 C$
- 8) $t = 0 : 0.1 : 0.35$
- 9) $Vn = \text{subs}(v)$
- 10) $Vnn = \text{double}(Vn)$
- 11) $in = \text{subs}(i)$
- 12) $inn = \text{double}(in)$
- 13) $P = V * i$
- 14) $Pn = \text{subs}(P)$
- 15) $Pnn = \text{double}(Pn)$
- 16) $\text{Plot}(t, Vnn, 'b')$
- 17) hold on
- 18) $\text{Plot}(t, inn, 'r')$
- 19) hold on
- 20) $\text{Plot}(t, Pnn, 'k')$
- 21) x label ['time (sec)']
- 22) y label ['variable']
- 23) grid on
- 24) grid minor
- 25) legend ['Voltage (V)', 'Current (A)', 'Power (W)']