Possibly useful equations:

Ohm's Law: $v = iR$

Power absorbed: $\mathrm{p} = \mathrm{vi}$ with current arrow pointing into the positive voltage terminal.

Power supplied: $\mathrm{p} = \mathrm{vi}$ with current arrow pointing out of the positive voltage terminal.

KCL: The sum of all currents flowing into a node equals zero.

KVL: The sum of all voltages taken around a closed path equals zero.

Capacitors	Inductors
$i = C\frac{dv}{dt}$	$v = L\frac{di}{dt}$

RC Circuits: $\tau = RC$

RL Circuits: $\tau = \frac{L}{R}$

RL and RC Circuits: natural response is $Ae^{-t/\tau}$

Parallel and Series RLC Circuits:

$\alpha = \frac{1}{2RC}$ (Parallel) ; $\alpha = \frac{R}{2L}$ (Series)

$\omega_0 = \frac{1}{\sqrt{LC}}$ (Parallel and Series)

Condition	Criteria	Natural Response
Overdamped	$\alpha > \omega_0$	$Ae^{s_1 t} + Be^{s_2 t}$ $s_{1,2} = -\alpha \pm \sqrt{\alpha^2 - \omega_0^2}$
Critically Damped	$\alpha = \omega_0$	$e^{-\alpha t}\left(At + B\right)$
Underdamped	$\alpha < \omega_0$	$e^{-\alpha t}\left(A\cos\omega_d t + B\sin\omega_d t\right)$ $\omega_d = \sqrt{\omega_0^2 - \alpha^2}$