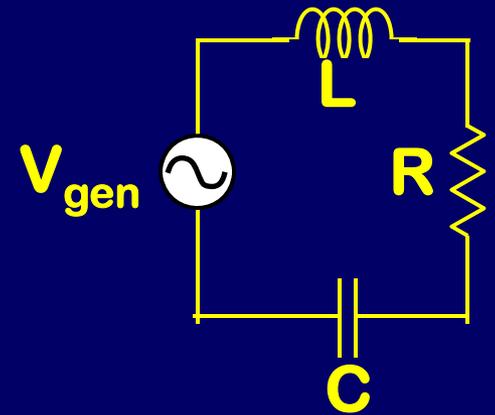


Time Dependence in AC Circuits



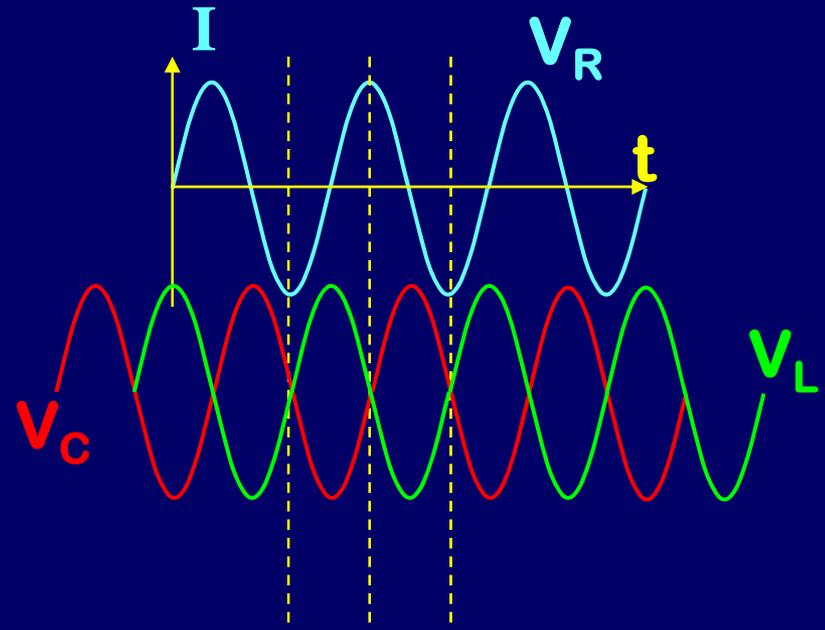
Write down Kirchoff's Loop Equation:

$$V_{\text{gen}}(t) = V_L(t) + V_R(t) + V_C(t) \text{ at every instant of time}$$

However ...

$$V_{\text{gen,max}} \neq V_{L,\text{max}} + V_{R,\text{max}} + V_{C,\text{max}}$$

Maximum reached at different
times for R, L, C



We solve this using phasors