

EECS 210 Section 2 – Lecture Summaries
Lecture 21, Friday, February 23, 2001

- Energy Storage Devices

- Inductor, $v = L \frac{di}{dt}$ (passive sign convention)

- ✓ Required v increases with L and with frequency

- ✓ Current must be continuous

- ✓ Inductors in series add

- ✓ Inductors in parallel look like $L_{eq} = \frac{1}{\frac{1}{L_1} + \frac{1}{L_2} + \frac{1}{L_3} + \dots}$

- Inductors – short to dc, open as $f \rightarrow$

- Capacitors – open to dc, short as $f \rightarrow$

- Across inductors, voltage leads current by 90°

- Across capacitors, current leads voltage by 90°

- Practical inductors typically have in-line resistance

- Practical capacitors can be near ideal